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SECOND  
ANNUAL REPORT  
OF THE  
PRESIDENT AND MANAGERS  
TO THE  
Monongahela Navigation Co.

*Presented January, 1840,*

WITH THE  
ACCOMPANYING DOCUMENTS.

.....  
SECOND EDITION.  
.....

PITTSBURGH:  
BAKEWELL & MARTENS, 71 GRANT ST. & 75 WOOD ST.  
1871.



Under the provisions of the said act stock was subscribed, a charter obtained, and the Company was duly organized by the election of the proper officers on the 10th day of February, 1837.

With the intention of preparing for a vigorous prosecution of the work, the Board of Managers, in April, 1837, engaged the services of W. Milnor Roberts, Esq., a gentleman of much experience on important public improvements in this State, and of acknowledged reputation as a civil engineer. But the derangement in the money concerns of the country, which occurred shortly afterwards, induced the Board to delay for a while the survey of the river, and in consequence of a continuous succession of freshets and high water in the Monongahela, during the proper season for exploration, the Board finally resolved to postpone all further action relative to the survey during that year.

The same adverse circumstances, which had prevented the making a survey for the contemplated improvements in 1837, continued to operate throughout the spring of 1838. And it was not until the month of July, in that year, that the engineer formed his corps of assistants and commenced operations, after which time no season could be more favorable for an exploration. The Monongahela became unusually low, affording the engineer a very favorable opportunity of examining the whole bed of the river, and of selecting the best sites for the necessary works. The report made by Mr. Roberts of the survey, together with the accompanying maps, profiles, plans and specifications, were submitted to the stockholders for their inspection, at the last annual meeting, all of which have been approved and adopted by the President and Managers, and, it is hoped, may prove satisfactory to the Company.

The result of this exploration confirmed the previous surveys which had been made of this important stream; one by a corps of United States Engineers, directed by Dr. Howard and the other by order of this State, under the control of E. F. Gay, Esq..

Copies of the maps prepared by both of these eminent

engineers are in the possession of the Company, and were found of great use in preparing the surveys which form the basis of the present work. From them it would appear that the distance from Pittsburgh to Brownsville, along the line of survey, is  $55\frac{45}{100}$  miles, and the ascent in the river  $33\frac{55}{100}$  feet.

The distance from Brownsville to the Virginia line is  $35\frac{11}{100}$  miles, and the ascent  $41\frac{4}{100}$  feet, making the total length of the proposed improvements  $90\frac{57}{100}$  feet, and the total ascent  $74\frac{59}{100}$  feet.

The river is a plane of easy descent, interrupted at intervals by ripples or shoals, formed from the gravel deposited at the outlets of the tributary streams. The average descent between Pittsburgh and Brownsville being  $\frac{5}{100}$  of a foot per mile. Above Brownsville it is  $1\frac{22}{100}$  feet per mile; and averaging throughout  $\frac{32}{100}$  of a foot per mile. The greatest natural descent in any single ripple on the lower division is at the mouth of Maple creek (3 feet); and in the upper division, at the mouth of Cheat river (6 feet). The greatest extent of natural pool is formed by the shoal below Cookstown, which backs the water eight miles.

The members of the Board being unanimous in their opinion that the preservation of good faith with all who may be employed by the Company, as well as sound policy, dictated the propriety of keeping the pecuniary liabilities of the Company within its undoubted means, resolved to put two dams—and but two at present—with the two adjoining locks, and other necessary works, under contract. And that the greatest benefit to the stockholders and the public may be derived from the works when completed, they determined to begin next above Pittsburgh, and continue the improvement up the river, with as little delay as the funds of the Company will warrant. It was determined to make the dams of timber, 12 inches square at the smallest end, fastened together with iron bolts, filled with stone, and covered with two courses of oak plank, four inches thick on the up-stream side, and spars flattened to eight inches thick on the lower side, and they will be finished

with sheet piling and gravelling. They are to have broad bases and flat slopes on each side of the wier or comb. Experience has proved that this plan of dams, when faithfully constructed, must be permanent.

The locks are to be built of cut stone, raised 7 or 8 feet above the tops of the adjoining dam, with gates resting on rollers and worked by chains and capstans. The outside walls to be protected by cribs filled with stone, which are to be extended so as to form pier heads both above and below the lock and dam.

The Board of Managers originally determined that the locks should be constructed 180 feet long by 40 feet wide within the chamber, with 5 feet depth of water upon the mitre sills, the height of dams being in the original charter restricted to  $4\frac{1}{2}$  feet. The Board was subsequently, however, induced to enlarge the locks to the dimensions of 190 feet long by 50 feet within the chamber, with 5 feet of water on the mitre sill, the legislative sanction having been obtained to the increasing the height of the dams to 8 feet. For a full and able statement of the reasons which led the Board to make this alteration, and of the probable benefits thence resulting, the Board refers to the report of the Engineer presented herewith.

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At an early period after the organization of the Company, it was discovered that from haste and inattention there were several omissions in the charter which would render it difficult to enforce its provisions, while some restrictions were inserted which would materially interfere with the utility of the improvements as a means of navigation, and prevent the possibility of its affording any compensation to the stockholders for the risk of an investment therein.

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Secretary, Judge Patton, he presented the memorial, a copy of which is appended to this report, the attentive perusal of which, it is hoped, will remove the objections which have existed in the minds of some of the stockholders to one of the most important alterations, and clearly prove the necessity for modifying many of the clauses of the original charter.

By the exertions of the senators and members of the Legislature from this and the adjoining counties, aided by the influence of the President of the Company, the amended charter was got through both houses, and on the 24th of June 1839, received the signature of the Governor.

As some apprehension was entertained that raising the dams might impede the navigation during heavy floods, and expose the property on the banks of the river to damage from the same cause, the attention of the Engineer was particularly directed to these points. The following extracts from his correspondence with S. Welsh, Esq., will show his views of this question :

“The floods in the Green river rise from 40 to 50 feet ; and in the Kentucky river from 30 to 55 feet. The Licking river, having more descent, seldom rises over 40 feet.

“There are several mill-dams upon the Licking from 6 to 10 feet high. When the river rises from 8 to 12 feet, or higher (about 5 feet on the dams), *flat*, boats with full loads of iron or agricultural produce pass over them without inconvenience. When the water is five feet or more upon the wier of the dams, the surface below rises so as nearly to coincide with the surface above. *‘A canoe could pass with safety.’*

“When the water runs so as to be 8 or 10 feet deep on the wier of the dams, the surface below will come up nearly to the same level as that above (the fall will be distributed along the pool), and steamboats may pass up or down over the dams. When the water rises much above this, there will be no perceptible difference between the level of the surface above and below the dam, and the current will not be strong enough to act injuriously upon the banks of the river, or upon the works connected with the dams.”

These views are corroborated by the reports of E. F. Gay, Esq., with reference to the slack water on the Conestoga creek; and the experience of the chief engineer on the Lehigh, Schuylkill, Susquehanna and Kiskiminitis.

The other most important variations in the new charter are thus set forth in the report of the Engineer :

The amended charter of the Company authorizes the receipt of tolls, when any portion of the navigation is completed, and provides that the net dividends on the stock shall not exceed 12 per cent. per annum.

The Company are also permitted to set apart a contingent fund for the purpose of defraying the expenses of extraordinary repairs, or other unforeseen expenditure, to which they may become liable—the sum of 20 per cent. of their tolls, interests, rents or profits, annually, until the said contingent fund shall amount to fifty thousand dollars—but in the annual abstract of its accounts laid before the Legislature, the amount of such contingent fund shall be set forth.

In case the Commonwealth shall at any time purchase the improvements, then the Commonwealth is to pay to the Company such sum or sums of money as, together with the net dividends, shall amount to the expense incurred in constructing said improvements, and keeping them in repair, with 8 per cent. interest per annum thereon.

The Company have the privilege of purchasing and holding such lands as may be necessary to the full use and enjoyment of the water rights secured to them by the original act of incorporation.

The time for obtaining a charter or grant from the State of Virginia, in relation to their improvements, is extended to the 31st day of March, 1842.

The foregoing are some of the important rights and privileges obtained by the amended charter, placing the Company upon a liberal footing.

For the convenience of reference in future, the Board has appended to this report the Act of 31st March, 1836, granting the original charter of the Company; and the Act of 24th



June, 1839, amending the said charter, together with some other legislative proceedings affecting the interests of the Company.

It was originally intended to construct the first lock and dam at M'Clurg's bar,  $2\frac{1}{2}$  miles above the Monongahela bridge at Pittsburgh; and the second lock and dam at Braddock's lower ripple,  $8\frac{1}{2}$  miles above the first, which would have made an artificial navigation of about 26 miles from Pittsburgh.

After the amendments to the charter were obtained, authorizing the construction of eight feet dams, the Board was induced to change the location of both these works.

The site ultimately chosen for the first lock and dam is about 500 feet above the upper line of Birmingham, being nearly one mile above the Monongahela bridge. Although this location will be rather more expensive than the situation previously contemplated, yet the Board is convinced that the advantages attending the connection of this important improvement with the outlet of the Pennsylvania canal on the Monongahela, without any intervening obstacle—its position at the upper termination of the harbor of Pittsburgh—the increased depth of water which will be afforded on the bar now rapidly forming at the mouth of the Two-Mile run—and other collateral circumstances—will far more than remunerate the Company for the additional expense incurred by the alteration.

The second lock and dam have been finally located at Braddock's upper ripple, above the mouth of Turtle creek. This position will be more advantageous than the first selected, as it will afford two feet more water on McFarland's ripple—will be attended with less expense in the construction of the works, and will prevent the liability of the Company for damages from the overflow of the land at the mouth or on the banks of the creek, or from the injury which some of the mills situate thereon might have sustained.

The contracts for the two lower locks and dams were entered into on the 17th December. The first lock and dam were allotted to Messrs. J. B. & J. K. Moorhead, who have, with

the approbation of the Board, subsequently united with Messrs. Foreman & Copper in the construction of the dam; and the second lock and dam were taken by Messrs. Phillips, Duncan & Duncan, who, however, abandoned the contract before commencement of the work; and after again advertising for proposals, the work was, on the 17th May, 1839, placed under contract with Messrs. Coreys & Adams.

The completion of these two locks and dams will effect an uninterrupted navigation extending 29 miles above the Monongahela bridge to Parkinson's ripple, as follows:

Distance from Bridge at Pittsburgh to Lock No. 1,.....	1 mile.
Distance from Lock No. 1 to Lock No. 2, .....	10 "
Distance from Lock No. 2 to head of slack-water navigation, thence resulting, say at Parkinson's ripple, ..	18 "
Total distance,.....	29 miles.

Lock and dam No. 3 will be located at Lobe's bar, above Elizabethtown. Lock and dam No. 4 at Grey's shoal; and will produce one foot additional depth of water on the pool at Brownsville, below the ripple there. Lock and dam No. 5 will be at Forsyth's ripple, two miles below Brownsville, and will back the water to Fishpot creek ripple, seven miles above Brownsville.

The tabular statement prepared by the Chief Engineer (see his report) will show the location and the estimated cost of the ten locks and dams, including water-lime and iron:

Say for the Lower Division 5 locks and dams, .....	\$335,616 18
For the Upper Division 5 locks and dams, .....	239,823 20
Together making, ..	\$575,439 38

Exclusive of damages and incidental expenses of the Company, it having been assumed that the locks below Brownsville are of the dimensions of those already contracted for, and the locks above that point 180 feet long in the chamber, and 40 feet wide. It may also be observed that the contracts for any new work can, in all probability, be made on better terms than the two lower works are taken at.

For a detailed statement of the operations of the contract-

## REPORT OF W. MILNOR ROBERTS, Esq.

Dated December 24th, 1839.

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*To the President and Managers of the Monongahela Navigation Company :*

GENTLEMEN—In obedience to a resolution of the Board, dated Nov. 27th, 1839, I have the honor to present the following Report :

In order to afford the Board and stockholders convenient means of reference to all the proceedings connected with the Engineer department, it has been deemed advisable to include a synopsis of former reports, forming a condensed statement of our operations to the present period.

My appointment as Engineer of the Company is dated in April, 1837 ; but owing to the unfavorable nature of that season it was finally determined at a meeting of the Board held Sept. 27th, 1837, to postpone the survey of the river until the following spring.

The surveys were commenced July 24th, and finished Sept. 18th, 1838. The instrumental examinations were conducted by my assistants, Mr. N. M'Dowell and Mr. Robert W. Clarke. In accordance with a resolution of the Board, I made a report, dated Sept. 4th, 1838, containing " estimates of the expense<sup>s</sup> of locks of three different sizes, together with my views in full of the advantages and disadvantages of each." On the 23d of October a general report was read to the Board, accompanied by maps and plans. The plans were then adopted, and directions were given to advertise for proposals for the construction of two locks and dams. Proposals were accordingly received until the 4th December inclusive, and the work was soon after put under contract.

will more fully appear from an examination of the Treasurer's account hereunto annexed.

According to the report of the Engineer, the total estimated cost of the two locks and dams now under contract, including iron work and water-lime, but exclusive of damages, salary of engineers and officers, and incidental expenses, would be for

Lock No. 1 (A),.....	\$45,431 50	
Dam No. 1,.....	32,215 00	
		\$77,646 50
Lock No. 2 (B),.....	\$49,608 70	
Dam No. 2,.....	29,566 80	
		79,175 50
Total estimated cost of work now under contract,		\$156,822 00

If the ensuing season should be favorable for the operations of the contractors, and the requisite funds can be collected from the State, the U. S. Bank, and other stockholders, it is fully expected that these locks and dams may be completed in the spring of 1841.

It is desirable that a part (if not the whole) of the third lock should be constructed before the second lock and dam are finished, as the expense of laying the foundation and the lower courses of masonry would be much increased by working in the deep water which would then exist. The expense would probably be about \$12,000, and the final completion of the work accelerated at least one year. Unless, however, an increased subscription of stock can be obtained from individuals, or the State, the Board would not feel itself justified in recommending any further extension of the work during the present distracted state of the financial affairs of the community.

Among the advantages resulting from the present location of lock and dam A, together with the adoption of the higher dams, the construction of a dry dock at that point for the repair of steamboats is, in the opinion of this Board, one of the most important, and would be attended with very small expense, as it would require little more than a wall or planked crib to be carried from the lower end of the lock to the river

ors, and the present situation of the works, the Board would refer to the accompanying report of the Engineer, by examination of which it will appear that Messrs. Moorheads commenced quarrying the stone for the lock in January last, about five miles above this city, but being disappointed in the quarry, were compelled to open another at M'Keesport, 17 miles up. A large quantity of timber was procured by them in the spring, but from the unusual succession of freshets, they were prevented from finishing the coffer dam till October. On the 15th of that month the masonry was commenced, and on the 15th November the work was suspended, and the water let into the coffer dam. During this time the foundation was secured, and two courses of masonry nearly finished, containing about 600 perches of stone.

Estimated am't of work done and materials furnished, .....	\$16,456 25
Amount paid the contractors,.....	13,987 72

Leaving a retained percentage,.....	\$ 2,468 53
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Messrs. Corey & Adams, the contractors for lock and dam B, commenced quarrying on 12th June. Their coffer dam was begun on the 20th of August and completed on the 21st September. The timber foundation was begun on October 3d, and the masonry was commenced on the 10th October. On the 28th November the work was suspended, and the water allowed to flow into the coffer dam. The foundation is nearly completed, and about 225 perches of masonry are laid.

Estimate of work done and materials provided,.. .....	\$ 9,787 87
The payments made amount to.....	8,384 40

Leaving a retained percentage of.....	\$ 1,453 47
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The above payments are exclusive of the amount paid for water-lime, say.....	\$ 1,625 00
For iron work, .....	1,089 05
And for pattern for quoin, .....	6 00

Together making.....	\$ 2,670 65
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Which belongs to the expenses of construction, and making an aggregate disbursement on that account of \$24,992.77, as

will more fully appear from an examination of the Treasurer's account hereunto annexed.

According to the report of the Engineer, the total estimated cost of the two locks and dams now under contract, including iron work and water-lime, but exclusive of damages, salary of engineers and officers, and incidental expenses, would be for

Lock No. 1 (A),.....	\$45,431 50	
Dam No. 1, .....	32,215 00	\$77,646 50
		<hr/>
Lock No. 2 (B),.....	\$49,608 70	
Dam No. 2, .....	29,566 80	79,175 50
		<hr/>

Total estimated cost of work now under contract, \$156,822 00

If the ensuing season should be favorable for the operations of the contractors, and the requisite funds can be collected from the State, the U. S. Bank, and other stockholders, it is fully expected that these locks and dams may be completed in the spring of 1841.

It is desirable that a part (if not the whole) of the third lock should be constructed before the second lock and dam are finished, as the expense of laying the foundation and the lower courses of masonry would be much increased by working in the deep water which would then exist. The expense would probably be about \$12,000, and the final completion of the work accelerated at least one year. Unless, however, an increased subscription of stock can be obtained from individuals, or the State, the Board would not feel itself justified in recommending any further extension of the work during the present distracted state of the financial affairs of the community.

Among the advantages resulting from the present location of lock and dam A, together with the adoption of the higher dams, the construction of a dry dock at that point for the repair of steamboats is, in the opinion of this Board, one of the most important, and would be attended with very small expense, as it would require little more than a wall or planked crib to be carried from the lower end of the lock to the river

bank, and a set of gates to be inserted in the guard wall at the head of the lock, with the requisite sluices and paddle gates.

With the exception of the dry dock recently completed at Louisville, there is no point on the Ohio which affords equal convenience for that purpose with that proposed by the Board; and although the necessity of the case has led to the adoption of floating docks for repairing boats, yet from the superior accommodation presented by a dry dock, if properly constructed, and the small expense of executing, attending and keeping it in repair, no doubt can exist of its being at once a benefit to the community and a source of considerable revenue to the Company.

It is also worthy of consideration that the back water from the Allegheny, which would frequently obstruct the action of any water mills that might be constructed with a view to employ the surplus water at this lock, would not interfere in any degree with the operations of a dry dock.

By reference to the statement of the Treasurer, it will be found that three instalments of \$5 on each share have been called for. The total number of shares subscribed is 3,161, which may be classed as follows:

Commonwealth of Pa., 500 shares, 3 instalments, each \$5,	\$ 7,500
U. S. Bank of Pa., 1,000 " " "	15,000
Mon. Bk. of Browns., 100 " " "	1,500
Individ. stockholders, 1,551 " say.....	\$23,365
W. M. Roberts,* in full, 10 " paid in full,.....	500 23,865

Making the whole amount called in.....\$47,865

Of this amount the following sums have been received, viz.:

Commonwealth of Pennsylvania,.....	\$ 7,500
United States Bank of Pennsylvania,.....	15,000
Monongahela Bank of Brownsville,.....	1,500
Individual stockholders,.....	\$12,807
W. M. Roberts,* in full,.....	500 12,807 \$36,807

Leaving a balance due on individual subscriptions of \$11,068

\* This amount was subscribed by Mr. Roberts, being the compensation allowed for loss of time and travelling expenses previous to commencement of survey.

From the decease, removal or bankruptcy of some of the subscribers, a portion of this amount, embracing 160 shares, may be considered as totally lost to the Company, and the shares forfeited.

Some of the other stockholders have withheld payment in consequence of the general embarrassments that have defeated the calculations of the most circumspect; many of these will, in the opinion of the Board, meet their engagements to the Company, as soon as an improvement in the situation of affairs will admit of their diversion of so much of their capital from its present investments. A sense of duty towards the State and the stockholders compelled the Board to commence legal proceedings in those cases where they deemed a further indulgence might be attended with hazard to the interests of the Company.

It is with sincere regret that the Board are under the necessity of stating, that some of the subscribers to the Company refuse utterly to comply with their engagements, on the alleged ground of informality in the proceedings of the Commissioners appointed to receive subscriptions, and of the extended powers granted to the Company by the amended charter; thus endeavoring to avail themselves of their own previous omission to comply with the literal terms of the Charter, and seeking in the benefits which the Company will derive from the liberality of the Legislature an excuse for their withdrawal from this important undertaking.

On these points the Board, at an early period, obtained the opinion of the most able counsel, and in pursuance of their advice have taken the most efficient means in their power of procuring a speedy decision of the question, by the proper tribunal.

The disbursements of the Board may, with propriety, be classed under the following general heads, for the items of which the Board would refer to the Treasurer's statement, viz.:



Expenses previous to the commencement of the survey,	\$1,070	48
Expenses of survey, including Engineer's salary for 1888,.....	\$8,822	16
Deduct amount received for boat, &c.....	115	00
Expenses of engineering department for 1889,	3,982	37
Expenses of construction,.....	24,992	77
Contingent expenses, 1888,.....	1,070	75
Contingent expenses, 1889.....	1,851	78
		<hr/>
Making together,.....	\$36,175	21
Which, deducted from the receipts of the Treasurer, for stock, per former statement,.....	86,807	21
		<hr/>
Will leave a balance in his hands of.....	\$	681 79

In relation to some of the items of this account, which may, on a cursory view, appear rather larger than necessary, the Board would respectfully remark, that accurate surveys, although expensive, are absolutely necessary to the prosecution of an undertaking like the present; that the cost of such surveys, and the expenses antecedent to the commencement of the work, were indispensable to its successful progress, and that the benefit resulting from them will apply to the whole improvement, although the outlay appears to bear upon the limited portion now under contract.

The Board would further observe, that it has been their earnest endeavor to exercise as strict economy, in all respects, as the nature of the work and the skill requisite for its satisfactory construction would permit, and that the first assistant engineer, Mr. McDowell, is the only person in the employ of the Company who devotes his whole attention to its affairs; the other officers being only compensated in proportion to the time occupied by their respective duties.

The great importance of this improvement cannot be fully appreciated until after some portion of it shall have been completed and put into operation. But when we bear in mind that it is designed to give a certain navigation to steamboats of the largest class, at all seasons of the year, when not obstructed by ice, and that the average cost of it will not exceed six thousand dollars per mile, being about equal to that of an ordinary turnpike road, its great utility, compared with its cost, will be too obvious to require further explanation.

If all our reasonable expectations respecting it are not doomed to disappointment, this artificial steam navigation will be of great value, as an example of what may be effected by an improvement of this character. All who are connected with or interested in the navigation, trade or manufactures of that region of country of which Pittsburgh may be considered the centre, are surely sensible of the injurious consequences resulting from the uncertainty of navigation in the Ohio river. Its interruption or cessation, at times when unexpected, and the valuable period of such interruptions, not unfrequently occasion great disappointments and heavy losses to the business of the whole western country. If for this uncertain and precarious navigation can be substituted another, which shall at all times afford a certain passage for steamboats of four or five hundred tons burthen, at a cost not exceeding that of a common road, or one-third that of an ordinary canal, the great advantages of such an improvement must be manifest to all. Such will be the result, the Board confidently believe, of a successful prosecution of the work in which the Company are now embarked. With such results in prospect, the undertaking merits and will doubtless receive the support necessary to its successful completion.

For the peculiar relation which the completion of this navigation will have upon the coal trade of the Monongahela, the Board would refer to the report of the Engineer, and conclude their observations with an earnest hope that the succeeding year will witness such progress in their undertaking as will convince the most skeptical of its importance to the general welfare, and furnish reasonable ground to expect a fair compensation for the State and private capital embarked therein.

WM. EICHBAUM,

*President pro tem.*

## REPORT OF W. MILNOR ROBERTS, Esq.

Dated December 24th, 1839.

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*To the President and Managers of the Monongahela Navigation Company :*

GENTLEMEN—In obedience to a resolution of the Board, dated Nov. 27th, 1839, I have the honor to present the following Report :

In order to afford the Board and stockholders convenient means of reference to all the proceedings connected with the Engineer department, it has been deemed advisable to include a synopsis of former reports, forming a condensed statement of our operations to the present period.

My appointment as Engineer of the Company is dated in April, 1837 ; but owing to the unfavorable nature of that season it was finally determined at a meeting of the Board held Sept. 27th, 1837, to postpone the survey of the river until the following spring.

The surveys were commenced July 24th, and finished Sept. 18th, 1838. The instrumental examinations were conducted by my assistants, Mr. N. M'Dowell and Mr. Robert W. Clarke. In accordance with a resolution of the Board, I made a report, dated Sept. 4th, 1838, containing " estimates of the expense<sup>s</sup> of locks of three different sizes, together with my views in full of the advantages and disadvantages of each." On the 23d of October a general report was read to the Board, accompanied by maps and plans. The plans were then adopted, and directions were given to advertise for proposals for the construction of two locks and dams. Proposals were accordingly received until the 4th December inclusive, and the work was soon after put under contract.

Upon instituting inquiries in regard to steamboat locks, as connected with slack-water navigation, it appeared that the system was yet in its infancy. Kentucky was the only State in the Union that had entered extensively into a system of artificial steamboat navigation. She had then in progress (and partly completed) the improvement of the Kentucky, Licking and Green rivers. Ohio had commenced the improvement of the Muskingum river. The size of the locks adopted in Kentucky was 175 by 38 feet, and on the Muskingum 175 by 36 feet. The size of the steamboat locks at Louisville is 190 by 50 feet.

It was ascertained that the larger class of boats navigating the river between Pittsburgh and the Mississippi, carrying from 300 to 800 tons, and drawing from 6 to 10 feet water, were from 180 to 225 feet in length, and from 45 to 55 feet wide; that the medium class of boats such as ply between Louisville and Pittsburgh, and carrying from 100 to 200 tons, and drawing from 4 to 5 feet water, were from 145 to 165 feet in length, and from 32 to 36 feet wide; and that the smallest class of boats then in use, carrying from 50 to 80 tons, and drawing from  $2\frac{1}{2}$  to  $3\frac{1}{2}$  feet water, were from 135 to 145 feet in length, and from 24 to 27 feet wide. It further appeared that steamboat builders were adding to the length and width of vessels without increasing the depth of the hold.

With the preceding data established, the following dimensions were adopted as the basis of a set of calculations which were given in detail in my report, viz.:

Large Locks—chamber,	.....	190 by 50 feet.
Medium “ “	.....	175 by 38 “
Small “ “	.....	146 by 28 “

The examinations and calculations led to the conclusion that a *medium* size would best accommodate the trade of the Monongahela river, and the Board accordingly adopted the size of 180 by 40 feet, and the plans were drawn to correspond.

The distance from Pittsburgh to Brownsville, along the line of survey, is  $55\frac{49}{100}$  miles, and the ascent in the river  $33\frac{55}{100}$  feet. The distance from Brownsville to the Virginia

line is  $35\frac{11}{100}$  miles, and the ascent  $41\frac{4}{100}$  feet; making the total length of the proposed improvement  $90\frac{57}{100}$  miles, and the total ascent  $74\frac{59}{100}$  feet. The river is a plane of easy descent, interrupted at intervals by ripples or shoals, formed by the gravel deposits at the outlets of the tributary streams; the average descent between Pittsburgh and Brownsville being six tenths of a foot per mile. Above Brownsville it is  $1\frac{22}{100}$  ft. per mile, and averaging throughout  $\frac{23}{100}$  of a foot per mile. The greatest natural descent in any single ripple on the lower division is at the mouth of Maple creek (3 feet); and in the upper division, at the mouth of Cheat river (6 feet). The greatest extent of natural pool is formed by the shoal below Cookstown, which backs the water 8 miles

The country through which the Monongahela river flows is generally of a rolling character, abounding in bituminous coal. Much of it is well cultivated, and the whole valley may be considered valuable as an agricultural region. Its head waters abound also in iron ore, and white oak timber of an excellent quality.

The flats along the river alternate from one side to the other, changing with every bend—no instance occurring where extensive bottoms appear on both sides at the same point. The lower bottoms seldom exceed 300 yards in width, the widest being less than half a mile. Those of the greatest extent occur near Pittsburgh, at Braddock's Fields, at the mouth of the Youghiogheny river, and near Cookstown.

Above Brownsville the flats are usually from 50 to 200 yards in width.

The river banks on the lower division are from 30 to 50 feet high, except in two or three instances, where they are not more than 25 feet. On the upper division they range from 35 to 55 feet above low water.

The average width of the river below Brownsville is 900 feet, and above that point 600 feet.

In ordinary freshets the stream rises from 20 to 24 feet; in very high floods, 30 feet, and at one time, in 1824, the water rose at several points to the height of 40 feet. No

flood since that period has exceeded 30 feet, except where the water may have been temporarily dammed by masses of ice.

A comparison of the natural elevation of the flats with the height of the freshets shows that the land will be but little exposed to overflow from dams of moderate size. The only material subject of damage arises from the location of some of the mills dependent upon the head and fall obtained at the ripples, which must of course be destroyed upon the completion of the slack-water.

Between Pittsburgh and Brownsville the bed of the river consists for the most part of rounded gravel, overlaying horizontal strata of limestone. The rock on this part of the river is not very solid. Above Brownsville the rock is more exposed and considerably more compact, affording better foundations for locks and dams.

In the original charter of the Company the height of the dams was limited to  $4\frac{1}{2}$  feet; and much obscurity existed in regard to the meaning of this part of the act. It might be construed to apply to the whole height of the dam above the bed of the stream, or to the height from the surface of one pool to the surface of another.

Upon the latter assumption, to overcome the fall from Pittsburgh to Brownsville it would have involved the necessity of constructing eight dams, and above Brownsville nine dams, or *seventeen* in all; whereas by the adoption of eight feet dams, *ten* would be sufficient. The estimated difference in expense in favor of the higher dams was, on the division from Pittsburgh to Brownsville, \$114,218.70, and on the whole line, \$250,211.50; and as I conceived that the character and utility of the improvement depended in a great degree upon a correct decision as to the height of the dams, pains were taken to obtain all the practical knowledge on the subject that was available.

The following information was derived from S. Welch, Esq., Chief Engineer of the State of Kentucky, who was at that time, and is at present, in charge of the public improvements on the Kentucky, Licking and Green rivers :

“ The floods in the Green river rise from 40 to 50 feet, and in the Kentucky river from 30 to 55 feet. The Licking river having more descent, seldom rises over 40 feet.

“ There are several mill-dams upon the Licking from six to ten feet high. When the river rises from eight to twelve feet, or higher (about five feet on the dams), *flat-boats, with full loads* of iron, or agricultural produce, pass over them without inconvenience. When the water is five feet or more upon the wier of the dams, the surface below rises so as nearly to coincide with the surface above. *A canoe could then pass with safety.*

“ When we can do so conveniently, we make the lifts of our locks about fifteen feet, but they vary from *ten to eighteen.*

“ All the works on our rivers will be covered with water during high floods. We raise our lock walls ten feet on the Kentucky, and eight feet on the Licking, above the top of the dam. The abutments will be raised a little higher than this.

“ When the water runs so as to be eight or ten feet deep on the wier of the dams, the surface below will come up nearly to the same level as that above (the fall will be distributed along the pool), and steamboats may pass up or down over the dams. When the water rises much above this, there will be no perceptible difference between the level of the surface above and below the dam; and the current will not be strong enough to act injuriously upon the banks of the river, or upon the works connected with the dams.”

The following facts bear upon the same question. They are taken from a report made by E. F. Gay, Esq., Civil Engineer, relative to a survey made along the Allegheny river in 1828. His remarks refer to the slack-water navigation constructed on Conestoga creek. They have likewise been the result of practical observation, and on that account should command consideration. He states “that previous to the improvement of that stream, high water marks were seen along its banks from *ten to twelve* feet above the surface of the common low water. This was said by all to be the usual height of the freshets; and from this fact the possibility of constructing

permanent dams on the stream was doubted by many. The dams however were built, varying in height from *ten* to *fourteen* feet above the bed of the stream; and in no instance since their construction has a rise of the freshets in the pools exceeded *three* feet; whereas in the unimproved parts of the river the same complaints are heard of its rise as formerly.

“This extraordinary difference is easily accounted for by its increased surface in the pools, and its unobstructed discharge over the dams.”

These facts corresponding with my own observations on the Lehigh, the Schuylkill, the Susquehanna and the Kiskiminitis rivers, upon which dams had been built from four to thirty feet in height, induced me to urge the Board to the adoption of a plan comprising the fewest dams. To strengthen the arguments in favor of this position, the following calculations were presented:

The fact being well settled that locks of 10, 15, or even 30 feet lift, as upon the upper Lehigh navigation, could be passed in nearly the same time as those of 5 or 6 feet lift, it was assumed that 15 minutes would be lost by a vessel in passing each lock; so that by substituting 10 dams, of 7 to 8 feet in height, instead of 17 dams of  $4\frac{1}{2}$  feet, there would be a saving of time of  $3\frac{1}{2}$  hours on every trip between Pittsburgh and the Virginia line, thus allowing an hour and three quarters more time at each end for loading and unloading. The wear and tear of boats occasioned by passing through the locks would be reduced in the proportion of 17 to 10. The difference to owners of steamboats using the navigation would probably be 15 per cent. or more, in favor of the higher dams.

The yearly saving to the Company would also be an item of considerable consequence. Allowing two men to each lock, there would be fourteen less lock tenders required, and the *keeping up* of seven locks, seven dams, seven lock-houses, and the contingencies connected therewith, would be forever avoided. The annual saving would be at least five thousand dollars. The risk of accidents, by which the navigation might be at times interrupted, would be reduced nearly in the same ratio with the increased number of dams.



The Board having approved of these general views in regard to the character of the contemplated improvement, left the question as to the height of the dams open, and made an application to the Legislature for the privilege of constructing them of a height not exceeding eight feet. Through the indefatigable exertions of the President of the Company, this privilege was granted by the last Legislature, but with a proviso attached, requiring the locks below Brownsville to be built 190 feet long by 50 feet wide. The size of the chamber previously adopted by the Board, was 180 feet by 40 feet. This change rendered it necessary to make a new set of plans, to meet the requirements of the amended charter. There were other and most important changes made in the charter, which it is not deemed necessary to recapitulate in this place.

The contracts for the two lower locks and dams were entered into December 17th, 1838.

The first lock and dam (letter A) was let to Messrs. J. K. & J. B. Moorhead. The second lock and dam was let to Messrs. Phillips, Duncan & Duncan, who eventually abandoned the work without having made a beginning. They were afterwards, by order of the Board, advertised for re-letting, and finally allotted to Messrs. Coreys & Adams. The contract with them was entered into on the 17th of May, 1839.

The Messrs. Moorhead commenced quarrying, at a point on the western side of the Monongahela river, five miles above Pittsburgh, January 20th, 1839. Some very fine stone were obtained at this quarry, but it proved expensive in working, and the contractors abandoned it and opened a quarry above M'Keesport, about seventeen miles from their work. In the latter part of April and beginning of May, the water in the river became tolerably low; but from the middle of May to the middle of September there was a succession of small freshets, which prevented them from working advantageously at the coffer dams. The building of the coffer dam cribs was commenced June 1st. They were finished and made water-tight October 5th, and the laying of the foundation was

begun on the following day. On the 15th of the same month the masonry was commenced, and on November 15th the work was suspended and water permitted to flow in and cover it.

The contractors succeeded in laying and securing the foundation, and finished in part two courses of masonry; nearly six hundred perches being laid.

After the coffer-dams were completed, the water was pumped out of the pit by a steam engine, working three screw pumps. Each pump is 16 feet long and 30 inches in diameter, having a wooden screw in the interior turning eleven times in the length of the pump. When they were in full operation they made about 50 revolutions per minute, discharging 300 cubic feet, or about 2,100 gallons, per minute, the water being raised from 7 to 9 feet above the bottom of the pit. The middle pump was driven by a shaft and cog-wheel. The others were driven by chains working on pulleys, connected with the middle pump. After the machinery was tolerably well perfected, all the water in the pit, together with the current leakage, was pumped out in eighteen hours. The pit contained about 260,000 cubic feet, or 1,820,000 gallons.

The original location of this lock and dam was about two miles above the Monongahela bridge; but, afterwards, the Board were induced to change the site, and it was removed one mile lower down, to a point about 500 feet above the upper line of Birmingham. This change of location has necessarily created some additional expense in the construction of the lock and dam, owing to the greater depth of water at the present site. It is, however, advantageous in several respects. As affording a better depth for navigation between the Company's works and the outlet of the Pennsylvania canal, on the Monongahela river (as well as on M'Clurg's bar), and a *rock* foundation for the lock instead of gravel.

Messrs. Coreys & Adams, the contractors for a second lock and dam, commenced quarrying stone June 12th. The cribs for their coffer-dams were commenced August 20th, and the

coffer-dams were completed September 21st. On the 28th of the same month they began to pump out the water, and on the 30th commenced the excavation of the pit. The laying of the timber foundation was commenced October 3d, and the laying of the masonry October 10th. On the 28th of November the work was suspended, and water allowed to fill the pit.

The contractors succeeded in getting in the foundation, with the exception of that part under the sluice gates, in the middle of the chamber, which is not yet finished. They also laid 225 perches of masonry.

The work is not so far advanced as it is at Lock No. 1, but as the location is ten miles nearer to the principal quarries, the contractors will be able to deliver the stone with greatest facility, and thus hasten the completion.

The completion of the two locks and dams will afford an artificial navigation, extending 29 miles above the Monongahela Bridge, as follows, viz.:

Distance from Monongahela Bridge, at Pittsburgh, to	
Lock No. 1,.....	1 mile.
From Lock No. 1 to Lock No. 2, .....	10 miles.
From Lock No. 2 to head of slack-water, created by Dam	
No. 2, at Parkinson's Ripple,.....	18 miles.
Total distance,.....	29 miles.

Dam No. 2 was at first, provisionally, located at the foot of Braddock's lower ripple; but after the supplement to the charter was obtained, authorizing the construction of eight feet dams, the location was changed to the head of Braddock's ripples, *above* the mouth of Turtle creek. It will afford two feet *additional* depth of water on M'Farland's ripples. We will thus have more than half the distance to Brownsville rendered navigable by the construction of two locks and two dams.

The fourth dam, at Frey's shoals, will create *one* foot additional depth of water on the pool at Brownsville, below the Brownsville ripple.

In my report of last year, there is an estimate of the prob-

able cost of the Company's improvement, founded on the assumption that locks of *medium* size were to be adopted. The estimated cost between Pittsburgh and Brownsville, with *five* locks and dams, was \$288,699.40; with *eight* locks and dams \$402,918.10. Between Brownsville and the Virginia line, with five dams and locks, \$239,813.20; with nine dams and locks, \$376,706.00. On the whole route, with ten locks and dams, \$528,512.60; with seventeen locks and dams, \$778,724.10. These estimates were based on such prices as it had been customary to pay, in this vicinity, for work of a similar nature. The proposals of contractors were, however, higher than had been assumed, and the work was finally let out at prices considerably above the original estimate.

The estimated cost of the two locks and dams now under contract, at the present contract prices, including iron and water-lime, is as follows, viz.:

Lock, No. 1, (Letter A),.....	\$45,431 50
Dam, No. 1, (Letter A), .....	32,215 00
	<hr/>
Lock and Dam, No. 1.....	\$77,646 50
	<hr/>
Lock, No. 2, (Letter B),.....	\$49,608 70
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Lock and Dam, No. 2,.....	\$79,175 50
	<hr/>
Total estimated cost of the two Locks and Dams under contract,.....	\$156,822 00

Should the Company be enabled to place other work under contract during the ensuing year, it is probable that they will succeed in obtaining more favorable terms. Labor and provisions are now considerably lower than they were at the time the first contracts were made, and it is not expected that a rise can take place for some time to come.

As we ascend the river, each succeeding dam will cost less, in consequence of the gradually decreased width of the stream; and the cost of the dams will not be varied, whether large or small locks be adopted on the upper navigation. The cost of the locks yet to be built, will, of course, depend upon the size that may be determined upon, above Brownsville.

Dam No. 3 will be located at Lobe's bar, above *Elizabeth*; dam No. 4 will be at Frey's shoal; and dam No. 5 will be at Forsyth's ripples, two miles below Brownsville. This dam will back the water to Fish Pot Creek ripples, seven miles above Brownsville.

In estimating the cost of these five locks and dams, it has been assumed that they are to be built of the same dimensions as those under contract. For the locks above Brownsville, or upon what may be termed the *upper section* of the navigation, the calculations have been made for locks with chambers 180 ft. by 40 ft.

The following tabular statement shows the location of the locks and dams and their estimated cost. The two first, being based upon the contract prices, and the others upon a fair estimate of the probable prices at which the work may hereafter be contracted for. It includes water-lime and iron, to be furnished by the Company.

#### TABULAR STATEMENT.

##### *Lower Section of Navigation,—to Brownsville.*

No. Lock & Dam.	Location.	Dist. from Pittsburgh in miles.	Length of Pool in miles.	Estimated Cost.
1	Near Pittsburgh,.....	1	10	\$77,646 50
2	Braddock's ripples,.....	11	12	79,175 50
3	Lobe's bar, .....	23	17	60,966 57
4	Frey's shoal,.....	40	13½	60,113 52
r	Forsyth's ripple... ..	53½	8½	57,714 09
				\$335,616 18

##### *Upper Section,—from Brownsville to Virginia Line.*

No. Lock & Dam.	Location	Dist. from Brownsville.	Distance fr. Pittsburgh.	Length of Pool.	Estimated Cost.
6	Smith's ripples,.....	6½	62	5½	\$50,681 78
7	Rice's ripples,.....	12	67½	7½	49,510 30
8	Sharpneck's ripples,...	19½	75	7½	47,600 20
9	Jacob's creek ripples,	27	82½	2½	46,020 40
10	Dunkard's creek do.	29½	85	5½	46,010 52
				\$239,823 20	

Making the total estimated cost of the ten locks and dams, exclusive of the damages and incidental expenses of the Company.....\$575,489 88

The annexed statement shows the estimated amount of work done, the estimated amount to be done, and the total estimated cost of the work now under contract—also the amount of per centage which has been retained, viz. :

Name of Work Done.	Estimated am't of work done.	Est. am't of work to be done.	Am't retained per centage.	Total estimated Cost.*
Lock A, (No. 1,)	\$16,456 25	\$28,975 25	\$2,468 53	\$45,431 50
Lock B, (No. 2,)	9,787 87	39,820 83	1,453 43	49,608 70
	<u>\$26,244 12</u>	<u>\$68,896 08</u>	<u>\$3,921 96</u>	<u>\$95,040 20</u>
Dam A, (No. 1.)	.....	\$32,215 00	.....	\$32,215 00
Dam B, (No. 2,)	.....	29,566 80	.....	29,566 80
	.....	<u>\$61,786 80</u>	.....	<u>\$61,781 80</u>
Amount of work done,.....				\$ 26,244 12
Amount of work to be done,.....				130,682 88
Total estimated cost of work under contract,.....				<u>\$156,820 00</u>
Amount of per centage retained, .....				\$3,921 96

In addition to the preceding statement, the following payments are properly chargeable to *construction*, viz. :

Nathan Harris, for Water-Lime, .....	\$1,625 00
W. & H. Hartupes, for Iron Work,.....	1,039 65
W. T. M'Clurg & Co. for Hollow Quoin Pattern,...	6 00
To be added to the work done,.....	<u>\$2,670 65</u>

For all other expenditures, including the amount paid to the Engineer department, the Board is respectfully referred to the annual report of the Treasurer of the Company.

It will be observed that the present estimated cost of the locks and dams under contract is somewhat greater than the original estimated cost of the same. This discrepancy is owing to the fact that the contracts were made at higher prices than had been previously assumed, owing to the change required by the Legislature in the size of the locks, from 180 by 40 feet to 190 by 50 feet, and to the change of the site, and the additional height given to the lower dam.

The precise situation of the second dam was not deter-

\* The total cost includes water-lime and iron work.

mined when the contract was made, two sites for it being then in view, one below and the other above Turtle creek. The upper location was finally chosen, and adopted by the Board. It is the most favorable of the two, both to the contractors and to the Company, and likewise to the land-owners at the mouth of the creek, whose property was liable to considerable inundation from the construction of a dam lower down.

From the facility with which stone for the masonry, and for the filling of the dams and cribs, may be obtained at the remaining dams, and from the change which has taken place in the price of provisions and labor since the first contracts were made, it is believed that the work to be let, in future, will cost proportionally less than that which is now in the course of execution.

With a favorable season next year, and a sufficiency of funds, the two locks and dams now building can be completed, so as to be used in the spring of 1841.

Should the Board not feel themselves authorized to contract for another lock and dam, or even for an entire lock, I would respectfully recommend to their consideration the propriety of making arrangements for laying the foundation, and two courses of masonry, by which means the work will be advanced one year. The cost would probably be 12,000 dollars.

Should the foundation of the third dam and the lower courses of masonry be left unfinished until the second dam is raised, and the water backed over the site, a heavy additional expense will necessarily be encountered whenever it is undertaken.

At Lock No. 1, near Pittsburgh, there is a very convenient means of establishing a large *dry dock* for steamboats at an inconsiderable expense. It can be done by running a wall or plank crib from the lower end of the lock to the hill, and introducing a set of gates through the guard-wall at the head. Nothing more is necessary to make it a complete dry dock. I respectfully recommend this matter to the favorable consideration of the Board.

## GENERAL PLAN OF WORKS.

The Monongahela improvement, when finished to the Virginia line, will comprise ten locks and ten dams, averaging about eight feet lift. The longest dam will have 1,100 feet over-fall. The length of the dams diminishes gradually as we ascend the stream, so that the shortest will have about 500 feet over-fall. Their height, from the bottom of the river to the comb, will be from 12 to 14 feet. They are to be 56 feet wide at the base, with slopes up and down stream of  $3\frac{1}{2}$  feet base to one foot rise, the lower portion being built perpendicularly. They are to be composed of round timber, of sufficient size to square one foot at the smaller end, built in crib-work, strongly bolted together with wrought iron bolts. They will be covered on the lower slope with spars, flatted to a thickness of eight inches—and on the upper slope, with a double thickness of jointed white-oak plank. A double course of vertical sheet piling is to extend along the whole of the perpendicular part of the dam, at the foot of the upper slope, to be fitted to the rock, or driven into the gravel foundation. Wherever it can be accomplished at any reasonable expense, it is intended to bolt the lower cross-timbers to the rock in the bottom of the river. The cribs are to be entirely filled with good stone, and the upper slope is to be thoroughly gravelled.

It is confidently believed, with the slopes we have adopted, that the floods will not have a tendency to undermine the structure, and that the dam will stand without material repair until the timber decays.\*

\* This opinion is founded mainly on the experience which has been had at the Leechburg dam, on the Kiskiminitis river.

The dam at that place was originally constructed with a slope on the lower side of about one and a half to one. With this angle it was found that the water excavated a very deep hole immediately below the toe of the dam, which was undermining the work.

The usual plan of sinking a crib in the space at the foot of the



The locks now in progress will be of cut stone, with chambers 190 feet long and 50 feet wide—being made in these respects to correspond with those on the Louisville and Portland canal. They are calculated to pass the large class of steamers that are built at Elizabeth, and other points on the river, without loads.

The walls are to be raised eight feet above the top of the adjoining dam, so that in freshets that will swell the water to a depth of eight feet or more on the wier, all the work will be submerged, and vessels or rafts may then pass over the dams in safety. The mitre gates will rest upon rollers running on wrought iron railway arcs secured to the bottom of the lock. They are to be worked by double chains and capstans.

In the middle of the lock chamber there is to be a flood-gate constructed upon the principle of the hydraulic gates invented by Josiah White, and used on the old Lehigh navigation. This gate is intended to be used for the purpose of clearing out bars which in high floods may accumulate below the locks.

The hydraulic flood-gate consists of two leaves extending across the chamber and working in horizontal quoins fastened to the bottom of the lock, arranged so that when they are not in actual use, the upper or overlying leaf will be on a level with the floor. They are to be worked by the pressure of the water from the upper level. It is admitted under the gates by a sluice through the wall on one side of the lock, and the pressure or head forces them to rise from a horizontal to an inclined position on any desired angle. In this way a small or great depth of water may be permitted to flow over them. When they are raised to a level with the surface of the upper

old work was adopted, and the covering timbers were extended over it in such a way as to change the slope to about three to one. It has since appeared that instead of continuing to dig out the material near the dam, the action or re-action of the water has had a tendency to *fill up* the space which existed at the time the crib was completed.

pool, all the mitre gates can be thrown open and fastened back in their recesses.

To lower the flood-gates, the admitting valves are shut, which stops off the pressure from the upper level. The discharging valve is then opened, and the water allowed to flow out from under the leaves, when they gradually descend to a horizontal position. By these regulating valves, which admit and discharge the water, they may be sustained at any desired elevation.

On the outside of the lock walls, and immediately against them, cribs filled with stone are to be built, to protect them from the effects of ice and driftwood, and to afford more convenient room for managing the locks when vessels are passing. These cribs are to be extended on the river side, in the form of pier-heads, to some distance above and below each lock.

In cases where it may be considered expedient, provision will be made in the arrangement of the guard-walls at the head of the lock for taking out the water for water-power purposes.

### SUPPLY OF WATER.

During the year 1838, the water of the Monongahela, in common with most of the streams in Western Pennsylvania, were lower than at any former period within the recollection of the oldest inhabitants.

Measurements of the stream were made at different times, in order to ascertain the *minimum* flow. On August 30th, when the stream was generally considered near its lowest stage, the quantity passing at Brownsville was 12,420 cubic feet per minute. All the tributaries, from that point to the mouth of the Youghiogheny river, were then dry at their outlets.

On September 19th it was again measured at Brownsville, when the quantity passing was found to be only 4,500 cubic feet per minute. This was the *actual* period of the lowest water during that extraordinary season.

The lock chambers being one hundred and ninety feet by fifty feet, with lifts of eight feet, there will be discharged, every time a lock is emptied, 76,000 cubic feet. Deducting from this amount 15,000 cubic feet for the space occupied by the hull of a vessel, estimated at 150 feet by 25 feet wide and 4 feet deep, it will leave 61,000 cubic feet lost in passing each boat, except in a case where an ascending and descending vessel meet, when the same quantity would pass both. Then allowing one-half of the whole supply of water to be lost by leakage at the dams and additional evaporation from the increased surface exposed, the remainder would be sufficient to pass a vessel every 27 minutes, or 63 every 24 hours. It is not, however, apprehended that the evaporation will be materially, if at all, increased by the completion of the slack-water, as the *depth* will be much greater and the proportional amount of evaporation reduced in consequence. In low water, when the stream is only running to the depth of a few inches on the ripples, the evaporation is greatly increased by the pebbly bottom. And it is only on the ripples that the width of the river, or exposed surface, will be much changed; the banks being generally abrupt along the present pools.

But in the event of a recurrence of a drought similar to that of 1838; or, if when the country bordering on the head waters of the river becomes thickly settled and generally cleared, the supply should fail for a period even of greater length, there is a remedy which can be applied with a certainty of success and at a very trifling expense. By making the artificial pools into temporary reservoirs.

This can be done, whenever the water begins to get low (should an extended business require it), by bolting a timber or plank one foot high on top of each dam. Allowing the dams to fill up this additional height, to be used as an available reservoir or succession of reservoirs. These would yield 380,160,000 cubic feet, or sufficient to pass 6,232 vessels in addition to the number which could be passed with half of the *minimum* flow, as ascertained last season.

It is not probable that there will be thirty days in any one

year when the natural flow will be so limited. For navigation purposes, there is therefore an abundant supply.

In ordinary times, there will be a very considerable *surplus*, which may be advantageously used for water power. Mills can be erected at the dams; and, if it should be deemed important to provide against any suspension of operation during a season of drought, they may be so constructed as to permit the use of steam power during the interval.

#### THE AMENDED CHARTER—PROSPECT OF TRADE, &c.

The amended charter of the Company authorizes the receipt of tolls when any portion of the navigation is completed, and provides that the net dividends on the stock shall not exceed twelve per cent. per annum. The Company are also permitted to set apart a contingent fund, for the purpose of defraying the contingent expenses of extraordinary repairs or other unforeseen expenditure, to which they may become liable, the sum of twenty per cent. of their tolls, interest, rents or profits annually, until the said contingent fund shall amount to fifty thousand dollars, but in the annual abstract laid before the Legislature, the amount of such contingent fund shall be set forth.

In case the Commonwealth shall, at any time, purchase the improvement, then the Commonwealth is to pay to the Company such sum or sums of money, as together with the net dividends, shall amount to the expense incurred in constructing said improvement and keeping it in repair, with eight per cent. per annum interest thereon.

The Company have the privilege of purchasing and holding such lands as may be necessary to the full use and enjoyment of the water right secured to them by the original act of incorporation.

The time for obtaining a charter or grant from the State of Virginia, in relation to their improvement, is extended to the 31st day of March, 1842.

The foregoing are some of the most important rights and privileges, obtained by the amended charter—placing the Company upon a liberal footing.

As soon, therefore, as the works now under contract are completed, or either of them, they may commence charging toll for the passage of vessels or other craft through the locks.

It has been shown that the two locks and dams afford a navigation 29 miles in length. Until the completion of the remainder of the lower section to Brownsville, this will of course be but a partial public benefit. Its importance is nevertheless considerable. And principally on account of the coal trade to be accommodated. On this portion of the river, as well as on the remaining distance above, nearly every hill is teeming with excellent bituminous coal, and immense quantities are annually shipped to Pittsburgh and to numerous ports along the Ohio and Mississippi rivers. It is impossible to obtain, with any accuracy, the present extent of this trade, but it is acknowledged by all who are conversant with the subject, to be one of great magnitude.

This business, large as it is now, will necessarily increase with the growth of the towns, and cities, and manufactories, where it is consumed; and, at some future day, as the veins in the immediate vicinity of Pittsburgh become exhausted resort must be had to the banks higher up the river. Every additional facility for conveying it to market will naturally increase the demand for the article.

A single fact will show, in a striking point of view, the advantages likely to result to the coal trade, upon the completion of the works now in progress. During the year 1837 a large number of flat boats were loaded with coal, at various points along the Monongahela, but, at that period of the season, when the owners wished to carry it to market, there was not sufficient depth of water on the ripples to enable them to float to the Ohio river. They were consequently compelled to remain, under a constant expense for watching and bailing, until near the close of the year; and when they at length succeeded in reaching the Ohio, many of them were

sunk and destroyed, by coming in contact with the ice. The *loss*, from this cause, during that single year, was estimated at forty thousand dollars. Had the Monongahela improvement been completed, they might have gone with safety, at a favorable period, and perhaps saved the whole of that amount.

In October of last year, there were 150 flat boats at the coal landings, up the Monongahela river, which had then been waiting upwards of *three months* for a rise of water in order to get to market. A flat boat usually carries 5,000 bushels of coal, and requires five hands to manage it; but when lying at the coal landings, one or two men only are necessary to watch and pump it out. There were, then, 750,000 bushels of coal, with 200 men or more; together, constituting a sinking fund for one-fourth of the year.

Estimating the coal at only five cents per bushel, there was the sum of \$37,500 lying as idle capital. And assuming that the men were paid one dollar per day, for 90 days, there was the sum of \$18,000 actually paid out as a direct tax upon the coal. A trade which can afford to be thus harassed and taxed, and still flourish, will readily pay at least a tithe of such expenses to insure its safety and regularity, and may be considered a sure source of revenue to the Company.

As the locks and dams are successively finished, the coal trade and the agricultural business of the flourishing counties of Allegheny, Fayette, Washington and Greene, will be gradually extended; and when the lower section shall be finished, and the connection is made with the *National road* at Brownsville, a large augmentation of general trade as well as travel may reasonably be anticipated.

The Company's improvement will then unite the National road (at a favorable point for branching off) with the Pennsylvania Canal at Pittsburgh, thus affording the rich district of country, of which Brownsville is the centre, an easy and regular channel to an eastern market. The change from an uncertain and precarious navigation to one which can be relied upon, will be beneficial to every department of the trade.

The completion of the whole line, to Virginia, will bring into play the fine beds of iron ore and the vast forests of shipping timber, which abound on the head waters of the Monongahela; and, when extended, as it doubtless will be, from twenty to thirty miles into Virginia, that valuable district of country will pour out its treasures upon its bosom.

It is difficult to estimate the amount of trade that will eventually seek this channel. That it will undoubtedly be very great, every one must admit who carefully examines the question.

The Monongahela improvement will afford to the travelling public a convenient line of conveyance between the National road and the city of Pittsburgh. Merchants and others engaged in transporting between Baltimore and the Ohio river, will naturally follow this route as the quickest, cheapest and safest course. To all the south-western counties of Pennsylvania, and some of the north-western counties of Virginia, its early completion is of the first importance.

This navigation was early regarded with a favorable eye by the Canal Commissioners of Pennsylvania, and has, in part, received the fostering care of the Commonwealth. Forming, as it will, the principal outlet for a large and flourishing agricultural and mineral basin, and acting as the link between that region and the improvements of Pennsylvania, it will continue to be viewed as a valuable adjunct to her great system.

Respectfully submitted.

W. MILNOR ROBERTS,  
*Chief Engineer.*

ENGINEER'S OFFICE,  
Pittsburgh, December 24th, 1839. }

ACCOUNT AND STATEMENT  
 OF  
 JOHN D. DAVIS, TREASURER,

Dated Dec. 31st, 1839.

MONONGAHELA NAVIGATION COMPANY,  
*In account with JOHN D. DAVIS, Treasurer.*

			Dr.
1837.			
March 7,	To cash paid A. Snyder for profiles Monongahela river,.....	\$ 20 00	
Sept. 9,	To cash paid John Jones for printing,...	4 50	
" 16,	Do. refunded W. Wade, am't paid by him for drawings Monongahela river, .....	111 25	
" 28,	To cash paid James Clarke, President, ..	326 68	
1838.			
March 6,	Do. Ramsey & Co. for printing,.....	5 00	
April 6,	Do. T. M. Howe, Treasurer Board Trade, for office rent in 1837,.....	50 00	
" 6,	To cash paid W. B. Scaife & Co. for tin case,.....	3 00	
" 6,	To cash paid B. Patton, Jr., Secretary, for services,.....	50 00	
Aug. 3,	To cash paid Cephas Gregg for expenses incurred for boat and outfit for surveyors,.....	230 00	
" 10,	To cash paid W. Milnor Roberts, Engineer, on account,.....	500 00	
" 10,	To cash paid R. M. Riddle for printing, .....	6 00	
Sept. 4,	Do. W. Milnor Roberts, Engineer, on account,.....	500 00	
" 14,	To cash paid W. Savory for engraving seal,.....	10 00	
" 29,	To cash paid T. M. Howe, Tr. B. Trade, on account,.....	50 00	
Oct. 24,	To cash paid Jas. Galbraith for services as attendant for Board of Managers, .....	20 00	
" 24,	To cash paid W. Milnor Roberts, Eng., on account,.....	1,000 00	
" 24,	To cash paid Jas. Clarke, President, on account,.....	200 00	
Nov. 21,	To cash paid Jas. Grayson for printing, .....	4 75	



Dec. 10,	To cash W. M. Roberts, bal. Eng. exp's,..	\$ 71 16
" 10,	Do. " on acc't salary,..	1,250 00
" 11,	Do. James Clarke, President,.....	200 00
Dec. 17,	To cash paid John D. Davis, Treasurer,	300 00
" 17,	Do. B. Patton, Jr., Secretary,.....	200 00
" 17,	Do. T. M. Howe, Treas. Board Trade, in full for office rent,.....	50 00
" 17,	To cash paid W. M. Roberts, in full for his services unto actual commence- ment of survey, — (See resolution Board Managers, Dec. 15, 1838,)...	500 00
" 22,	To cash pd. N. M'Dowell, Assist. Eng.,..	180 00
1839.		
M'rch 23,	To cash paid Craig & Grant, for print- ing in <i>Gazette</i> , and other papers,...	74 00
April 23,	W.M. Roberts, Eng., on account,.....	700 00
" 23,	To cash paid N. M'Dowell, Ass. Eng....	400 00
" 23,	Do. J. K. & J. B. Moorhead, con- tractors, Lock A,.....	825 00
April 23,	Do. Daniel G. Wearts, office rent,...	30 00
" 23,	Do. Cephas Gregg, balance his acc't.,	35 36
" 29,	To cash paid R. M. Riddle for printing,	5 00
May 17,	Do. J. K. & J. B. Moorhead, con- tractors, Lock A,.....	2,985 00
June 12,	To cash pd Coreys & Adams, cont. Lk. B,	684 00
" 18,	Do. W. Hartupee, iron work for Locks,	291 10
July 8,	Do. Johnston & Stockton, for stationery,	47 00
" 10,	To cash paid J. K. & J. B. Moorhead, contractors, Lock A,.....	2,060 00
" 12,	To cash pd N. Harris, cement for Locks,	600 00
" 29,	Do. James Clarke, Pres't, on account,	20 00
" 29,	To cash paid refunded Wm. Eichbaum, expenses incurred by Board of Man- agers in visiting Lock and Dam B,	10 00
" 29,	To cash paid J. K. & J. B. Moorhead, contractors, Lock A,.....	1,107 55
" 30,	To cash pd W. M. Roberts, Eng. on acct.	500 00
Aug. 1,	Do. Coreys & Adams, contr. Lock B,	586 50
" 1,	To cash paid Jas. Galbraith for services as attendant of Board of Managers,	15 00
" 1,	To cash paid R. M. Riddle for printing,	6 10
" 7,	Do. N. M'Dowell, Assist. Engineer,	493 87
" 24,	Do. N. Harris for cement furnished for both Locks,.....	490 00
" 24,	To cash paid J. K. & J. B. Moorhead, contractors, Lock A,.....	1,274 49

Aug. 24,	To cash paid Wm. Hartupee for iron work for Locks,.....	\$306 51
" 26,	To cash pd. Coreys & Adams, cont. Lk. B,	763 00
" 29,	To cash paid W. T. M'Clurg & Co.,...	6 00
Sept. 12,	Do. Thomas Phillips for printing,...	2 50
Oct. 2,	Do. Coreys & Adams, contr. Lk. B,	1,435 65
" 2,	Do. J. K. & J. B. Moorhead, contractors, Lock A., .....	1,110 95
" 2,	To cash paid N. M'Dowell, Assist. Eng.	300 00
" 2,	Do. May&Hannas for proviso's furn.	91 00
" 2,	Do. J. Galbraith for serv. as attend't,	15 00
" 14,	Do. W. B. Row for printing,.....	2 00
Nov. 16,	Do. John D. Davis for sundry expn's,	35 77
" 16,	Do. N. Harris for amount for Locks,	535 00
" 16,	Do. A. M. Hartupee for iron work for both Locks,.....	400 76
" 16,	To cash paid R. M. Riddle for printing,	6 50
" 16,	Do. J. K. & J. B. Moorhead, contractors, Lock A.,.....	1,500 00
" 28,	To cash paid John D. Davis for services as Treasurer,.....	500 00
" 28,	To cash paid J. K. & J. B. Moorhead, contractors, Lock A.,.....	1,290 64
" 28,	To cash pd. Coreys & Adams, cont. Lk B,	2,000 00
" 28,	Do. do. do. do.	1,747 50
Dec. 4,	To cash paid B. Patton, Jr., for service as Secretary,.....	100 00
" 5,	To cash paid B. P. Hartshorn, Treas. Board of Trade, for office rent, .....	125 00
" 26,	To cash paid W. M. Roberts, Eng. in full for his salary to July 19th, 1840...	1,150 00
" 26,	To cash paid W. M. Roberts for drawing paper,.....	7 50
" 26,	To cash paid Jas. Clarke, Pres't, on acct,	150 00
" 26,	Do. Coreys & Adams, contr. Lk. B,	1,117 75
" 26,	Do. A. M. Hartupee, iron work for Lks	41 28
" 25,	To cash paid J. K. & J. B. Moorhead, contractors Lock A.,.....	1,834 09
" 26,	To cash paid James Galbraith for services as attendant,.....	15 00
" 26,	To cash paid N. M'Dowell, Assistant Engineer in full,.....	438 50
	Balance in Treasury,.....	631 79
		<hr/>
		\$36,922 00

## CREDITS.

1889.			
Dec. 31,	By cash received for sale of boat used by Engineers,....	\$	115 00
" 31,	By cash rec'd from B'k United States,		15,000 00
" "	" from Com'th Pennsylvania,...		7,500 00
" "	" from Bank of Brownsville,....		1,500 00
" "	" from individual Stockholders,		12,807 00
			<hr/>
		\$	36,922 00

JOHN D. DAVIS, *Treasurer.*

PITTSBURGH, Dec. 31, 1889.

STATEMENT OF THE  
 NUMBER OF SHARES SUBSCRIBED, AND THE PAYMENTS MADE THEREON,  
 BY THE  
 STOCKHOLDERS OF THE MONONGAHELA NAVIGATION COMPANY,  
 Up to December 31st, 1889.

STOCKHOLDERS.	Number of Shares Subscribed.	Amount of Stock.	AMOUNT OF INSTALMENTS.		
			Amount called for	Amount Paid.	Amount Due.
Commonwealth of Pennsylvania.....	500	25,000 00	7,500 00	7,500 00	.....
Bank United States of Penn.,.....	1,000	50,000 00	15,000 00	15,000 00	.....
Monongahela Bank of Brownsville, ..	100	5,000 00	1,500 00	1,500 00	.....
Individuals in Allegheny Co.,.....	946	47,300 00	14,190 00	8,028 00	6,162 00
Do. Fayette Co. ....	509	25,450 00	7,635 00	3,805 00	3,830 00
Do. Washington Co. ....	20	1,000 00	300 00	155 00	145 00
Do. Indiana Co. ....	10	500 00	250 00	250 00	.....
Do. other places,.....	66	3,300 00	900 00	69 00	921 00
W. Minor Roberts,.....	10	500 00	500 00	500 00	.....
Total,.....	3,161	\$168,050 00	\$47,865 00	\$36,807 00	\$11,058 00

**STATEMENT OF EXPENDITURES**  
**MADE BY THE MONONGAHELA NAVIGATION COMPANY,**  
 Up to December 31st, 1889.

DESCRIPTION OF EXPENDITURES.	Expenses prior to commencement of Surveys.		Expenditures in 1888		Expenditures in 1889.			Total amount expended.					
	Surveys.		Miscellan's		Construction.	Engineer Department.	Miscellan's.						
	Preliminary	.....	.....	.....									
Compensation of President,.....	826	68	400	00	.....	.....	a 850	00	1,076	68			
Do. Secretary,.....	50	00	200	00	.....	.....	c 100	00	350	00			
Do. Treasurer,.....	.....	.....	300	00	.....	.....	.....	500	00	800	00		
Office Rent, Fuel and Attendant,.....	50	00	150	00	.....	.....	.....	170	00	370	00		
Printing, Stationery, &c.,.....	9	50	20	75	.....	.....	.....	150	60	180	85		
Compensation of Engineers,.....	b 500	00	2,770	72	.....	.....	.....	8,810	00	7,080	72		
Other exp. of Eng. dep't, \$1,051 44 } Deduct for Boat sold, 115 00 }	.....	.....	986	44	.....	.....	.....	172	87	1,108	81		
Pd. Contractors on Lock and Dam No. 1,.....	.....	.....	.....	.....	.....	.....	.....	18,987	72	18,987	72		
Do. do. do. No. 2,.....	.....	.....	.....	.....	.....	.....	.....	8,334	40	8,334	40		
Iron Work for works,.....	.....	.....	.....	.....	.....	.....	.....	1,045	65	1,045	65		
Water Lime for do. ....	.....	.....	.....	.....	.....	.....	.....	1,625	00	1,625	00		
Contingencies,.....	.....	.....	.....	.....	.....	.....	.....	.....	81	13	81	13	
Copies of Drawings.....	134	25	.....	.....	.....	.....	.....	.....	184	25	184	25	
<b>Total,</b> .....	1,070	48	8,707	161,070	75	24,992	77	3,982	87	1,351	78	36,175	21
Balance remaining in Treasury on the 1st of January, 1840,.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<i>a</i> An unsettled account.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<i>b</i> Subscribed in stock of the Company.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<i>c</i> Resigned in July, 1839.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

**PITTSBURGH, December 31, 1889.**  
**JOHN D. DAVIS, Treasurer.**

# Memorial of the President and Board of Managers

TO THE

## LEGISLATURE OF PENNSYLVANIA.

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*To the Senate and House of Representatives of the Commonwealth of Pennsylvania :*

THE President and Managers of the Monongahela Navigation Company beg leave to suggest sundry alterations, improvements and additions, which they pray your honorable bodies to make to the act entitled "An act to authorize the Governor to incorporate a Company to make a lock navigation in the river Monongahela," passed the 31st day of March, 1836.

Your memorialists pray that a remedial provision may be enacted to cure any defects in the organization and early operations of the Company, under the said act of incorporation. This provision is asked for chiefly on account of the Commissioners having omitted, in many instances, to demand and receive the five dollars required by the act to be paid on each share at the time of subscribing.

The style of the Company, under the act of incorporation, is, "The President, Managers and *Company* of the Monongahela Navigation *Company*"—a title so awkward and so unnecessarily verbose, that it could only have been adopted through inadvertence. It is, therefore, respectfully asked that it may be changed to "The Monongahela Navigation Company."

There is some ambiguity as to the meaning of the proviso to the 4th section of the Act, which limits the number of votes to which any one stockholder can be entitled, with any number of shares, to *ten*. It is believed that if the number twenty were substituted, it would convey the true meaning of the Legislature, and be altogether proper.

It is a matter of vital importance, and essential to secure the full benefit and utility of the contemplated improvement to the Company, to the trade, and to the country at large, that the Company should be authorized to increase the elevation of the dams, to any height, not exceeding eight feet, from pool to pool, below Brownsville, and ten feet above that

point. Your memorialists pray that authority may be granted for this purpose. It is shown by the report of the Engineer, which is hereto annexed, that the whole improvement will, in that event, cost less—be less liable to injury or destruction—more permanent—cost less for repairs—require fewer lock-keepers and less superintendence—cause less detention to the trade—create a better navigation and more valuable water powers—and be attended with no additional damage to private property. The same section, which limits the height of the dams to 4½ feet, prescribes the mode of assessing damages. It is suggested whether, in selecting umpires or assessors for this purpose, the most effectual mode of procuring such as would be truly “disinterested,” would not be, to provide for their appointment by the courts, and to require them to be selected and summoned from some adjoining county, through which no portion of the contemplated improvement will pass. Experience has shown that, if selected from amongst the immediate neighbors of the claimants, they are too apt to indulge their natural feelings of sympathy at the expense of injustice to the Company. The same section compels the Company, before entering upon any lands, to give security for the payment of damages. Troublesome or avaricious men may render this provision, to say the least, very vexatious to the Company, their officers and contractors. It may also be the means of protracting the work, and of increasing its cost. For these and other obvious reasons, your memorialists pray that this provision may be repealed.

The mode prescribed in the *tenth* section of the Act for charging toll, is considered quite objectionable. On the public improvements belonging to the Commonwealth, and on almost all the railroads, canals, and artificial slack-water in the United States, toll is charged *by the mile*. But the Schuylkill Navigation Company, which is made to furnish the standard for this Company, are required to charge toll *by the lock*, according to the number of feet lift; and they are permitted to exact one rate above and another below the town of Reading. Which of these two rates shall furnish the criterion? There are striking points of dissimilarity between the two rivers, which render it inexpedient to use the lock as a measure for charging toll on the Monongahela, while the same measure is proper enough on the Schuylkill. The latter stream falls 610 feet in 110 miles, or more than 5 feet 6 inches to the mile; while the former has a fall of only 75 feet to 89 miles, or about 10 inches to the mile. Hence, the same amount of tolls for which a vessel could navigate on the Monongahela a

distance of 89 miles, would only carry it  $13\frac{1}{2}$  miles along the Schuylkill. In other words, the Schuylkill Company can charge as much toll for one mile of navigation as this Company can charge for  $6\frac{1}{2}$  miles. Your memorialists pray that a provision, which subjects this Company to such obvious injustice and inequality, may be amended. The *7 per cent.* dividends to which this Company is limited by the same section, are disproportioned to the risk incurred by the stockholders in their investment. To encourage the enterprise, and to indemnify the stockholders for advances made years before they can have any return, as well as to cover the risk of never obtaining any adequate interest on their money, a limit of less than *12 per cent.* should not be imposed, in case the trade will warrant it. The Schuylkill Navigation Company, which is made the exemplar of this Company, is not, it is believed, restrained from dividing as much as *15 per cent.*, and consequently their stock is high in the market.

The penalties prescribed in the *eleventh* section are too light on the commandants of boats, and too heavy on the Company. In making no provision for accidents and circumstances beyond the control of the Company or their agents, it would be unjust in its operation. The Company should not be liable to a fine, unless the trade be detained through malice or culpable negligence.

The *fifteenth* section deprives the Company of the right of setting apart any portion of their profits as a contingent fund. This is a privilege essential to all great works liable to injury or destruction; and your memorialists pray that it may be extended to this Company.

The *sixteenth* section contains a provision in relation to private dams, the effect of which is to destroy the unity of an important public improvement, and to subject it to the trammels and commingling of private interests. This provision, if unrepealed, will inevitably produce the most serious embarrassment, interfere with a judicious plan of improvement, and enhance, unnecessarily, the cost of the work. Your memorialists, therefore, pray that this section may be repealed, and that the owners of private dams may be placed upon the same footing with the owners of other kinds of property liable to be injured by the works of the Company, whose true interests will always restrain it from doing wanton injury to the property of individuals.

The right reserved to the Commonwealth, in the *eighteenth* section, to buy out the Company at the expiration of 25 years, is proper enough. But the terms are unjust, inasmuch as the



Company are bound to incur all the risk, trouble and expense of the work; and if, in the end, it should prove profitable, may be deprived of it, and only get 6 per cent. on their investment. This section is, moreover, inconsistent with some of the provisions contained in the tenth section. Your memorialists, therefore, pray that it may be altered, so as to make it obligatory on the Commonwealth, in case of resumption, to pay the capital and allow the Company to retain the dividends which shall have been made, together with any contingent fund which shall have accumulated, in case the dividends shall have exceeded 6 per cent.; but in case they shall have fallen short of that amount, to pay the capital, with 6 per cent. on the same, from the period of its investment, and allow the Company to retain the contingent fund.

The limitation of six months prescribed in the *nineteenth* section for the commencement of suits and actions, should be extended to at least one year, in order to afford ample time for the detection of offenders, whose guilt often remains long concealed.

The provisions contained in the *twentieth* section of the act your memorialists pray may be enlarged, so as to authorize the Company to purchase such lands, in quantity and location, as may be necessary to the full use and enjoyment of the water rights secured to them by the act.

The limitation of three years prescribed in the proviso to the *twenty-first* section, your memorialists pray may be extended. As the work approaches completion to the Virginia State line, it will, it is conceived, be ample time to enter into the stipulation therein prescribed with that State.

JAMES CLARKE,

*President of the Mon. Nav. Co.*

PITTSBURGH, Dec. 7th, 1838.

## AN ACT

To authorize the Governor to incorporate a Company to make a Lock Navigation on the River Monongahela.

SECTION 1. *Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania in General Assembly met, and it is hereby enacted by the authority of the same,* That Thomas H. Baird, Aaron Kerr, Ephraim L. Blain, William Briant, Shasbazzer Bently, Andrew Gregg, John Bowers, William Vankirk, Samuel Beatty, William Hopkins, and James Gordon of Washington County, George Dawson, Benedict Kimbor, George Hogg, James L. Bowman, Israel Miller, David Gilmore, E. P. Oliphant, Jeremiah Davison, Thomas Wilson, Tazwell P. Martin, George Cramer, Yates S. Conwell, Thomas Beatty, Aaron Buchel, John Harshe, Andrew Stewart, Samuel Evans, Isaac Crow, George Vance, James C. Etington, Robert Brown, James C. Ramsey, David B. Rhoads, William Everhart, Westley Frost, and Samuel J. Krepps of Fayette County, Isaac Hill, Alexander Davidson, Thomas Hughes, Lawrence L. Minor, Robert Maple, Daniel Boughner, Thomas Horner, sen., Benjamin F. Black, Joseph Baily, Ralph Drake, Samuel M'Guire, Aaron Gregg, Joseph Reinhart, John Lindsay, William Litzanberg, Jonathan Garrard, and James Mapel of Greene County, Joseph Taylor, Thomas Reynolds, James M'Clure, Gilbert Stevens, Samuel Church, James W. Burbridge, Fauntley Muse, Samuel Walker, Christopher Magee, Neville B. Craig, James Ross, Jr., Samuel Stackhouse, Thomas Bakewell, James Anderson, John Irwin, Charles S. Bradford, William A. Penniman, Henry Smyser, William Larimer, Valentine Fehl, George Bell, Robert H. Peebles, Thomas M. Giffin, are hereby appointed commissioners to do and perform the several things hereinafter mentioned, that is to say: they, or any five of them, shall, on or before the first Monday of May next, procure a sufficient number of books, one or more of which shall be opened at convenient places in the city of Pittsburgh, at Elizabethtown and M'Keesport in Allegheny County, at Williamsport and Fredericktown in the County of Washington, at Cookstown, Brownsville and Geneva in the County of Fayette, and at Greensburgh and Jefferson in the County of Greene, and in each of them enter as follows: "We, whose names are hereunto subscribed, do

promise to pay to the President and Managers of the Monongahela Navigation Company, the sum of fifty dollars for every share of stock set opposite to our names respectively, in such manner, and in such proportions, and at such times, as shall be determined by the President and Managers of said Company, in pursuance of an act of the General Assembly of this Commonwealth, entitled 'An act to authorize the Governor to incorporate a Company to make a lock navigation on the river Monongahela:'. Witness our hands this        day of

in the year of our Lord one thousand eight hundred and        ;" and shall thereupon give notice, in one or more newspapers printed in the county of Fayette, and one or more newspapers printed in the borough of Washington, one or more newspapers printed in Greene county, and one or more newspapers printed in the city of Pittsburgh, for one calendar month at least, of the times and places when and where the said books shall be kept open to receive subscriptions for the stock of the said Company, at which times and places, at least two of the commissioners shall attend, and permit all persons of lawful age who shall offer to subscribe in the said books, in their own name, or in the name of any other person who shall authorize the same, to subscribe for any number of shares in the said stock, and the said books shall be kept open respectively for the purpose aforesaid, at least six hours in every juridical day, for the space of ten days, at the following named places, to wit: the city of Pittsburgh, Elizabethtown in the county of Allegheny, at Williamsport in the county of Washington, at Brownsville, Cookstown and Geneva in the county of Fayette, and at Greensburgh and Jefferson in the county of Greene; and if, at the expiration of ten days, it shall be ascertained that there is not six thousand shares subscribed in the books aforesaid, the said commissioners may adjourn from time to time, and transfer the books elsewhere, until the whole number of six thousand shares aforesaid shall have been subscribed; of which adjournment and transfer of the books, the commissioners aforesaid shall give public notice, as the occasion may require, and when the whole number of shares shall be subscribed, then the books shall be closed: *Provided, always,* That every person offering to subscribe in the said books, in his own or pny other name, shall previously pay to the attending commissioners the sum of five dollars for every share subscribed, out of which shall be defrayed the expenses attending the taking of such subscriptions, and other incidental expenses, and the remainder shall be paid to the treasurer of the corporation,

as soon as the same shall be organized and the officers chosen, as hereinafter mentioned.

SECTION 2. That when two thousand shares or more of the said capital stock shall be subscribed, the commissioners, or a majority of them, shall certify to the Governor, under their hands and seals, the names of the subscribers, and the number of shares subscribed by each, whereupon the Governor shall, by letters patent, under his hand and the seal of the Commonwealth, create and erect the subscribers, and if the subscription be not full at the time, then all those who shall thereafter subscribe to the number of shares as aforesaid, into one body politic and corporate, in deed and in law, by the name, style and title of "The President, Managers and Company of the Monongahela Navigation Company," and by the same name the subscribers shall have perpetual succession, and all the privileges and franchises incident to a corporation, and shall be capable of taking and holding their capital stock, and the increase and profits thereof, of enlarging the same from time to time by new subscriptions, in such manner and form as they shall think proper, if such enlargement shall be found necessary to fulfil the intention of this act; of purchasing, taking and holding, to them, their successors and assigns, in fee simple, or for any less estate, all such lands, tenements, hereditaments and estate, real and personal, as shall be necessary to them in the prosecution of their work, of suing and being sued, and of doing all and every other matter and thing which a corporation or body politic may lawfully do.

SECTION 3. Samuel Walker, George Dawson, George Hogg, James L. Bowman, Israel Miller, Aaron Kerr, Neville B. Craig, Samuel Stackhouse, James Ross, Jr., and Wm. W. Irwin, or a majority of them, shall, as soon as conveniently may be after the said letters patent shall be obtained, give at least twenty days' notice in all the public newspapers hereinbefore mentioned, of the time and place by them appointed for the subscribers to meet, in order to organize the said Company, who shall choose by a majority of votes, by ballot, to be given in person or proxy, duly authorized, one president, and ten managers, a treasurer, secretary, and such other officers as shall be deemed necessary, which proxy shall have been obtained and bear date within three months previously to the election at which such proxy shall be presented; and the president and managers, chosen as aforesaid, shall conduct the business of said Company until the first Monday of January next, and until like officers shall be chosen, and may make such by-laws, rules, orders and regulations, as do not

contravene the constitution and laws of the United States or of this State, that may be necessary for the well governing the affairs of the Company; and the said Company may demand and take such securities from their officers and agents, and in such sums as may be fixed by the by-laws, or by resolution of the board, for the faithful discharge of their respective duties.

**SECTION 4.** The stockholders shall meet on the first Monday of January in every year, at such place as may be fixed upon by the by-laws, of which notice shall be given at least twenty days, by the Secretary, in the newspapers before mentioned, and choose by a majority of votes present, such officers for the ensuing year as mentioned in the third section of this act, who shall continue in office for one year, and until others are chosen, and at such other times as they may be summoned by the Managers, in such manner and form as shall be prescribed by the by-laws, at which annual or special meeting, they shall have full power and authority to make, alter or repeal such by-laws, by a majority of votes, in manner aforesaid, and to do and perform any other corporate act; and every person holding ten, or any less number of shares of said stock, shall be entitled to one vote for every share so held, at any election for officers of said Company, or other meeting of stockholders, and one vote for every additional ten shares: *Provided*, That no number of shares shall entitle the holder thereof to more than ten votes: *And Provided*, That the omission of the stockholders to meet and elect as aforesaid, shall work no forfeiture, but they may be afterwards called together for that purpose by the Managers.

**SECTION 5.** The said President and Managers shall meet at such times and places as shall be found most convenient for the transaction of their business, and when met, five shall be a quorum, who, in the absence of the President, may choose a chairman, and shall keep minutes of their transactions, to be fairly entered in a book, and a quorum being formed, they shall have full power and authority to appoint all such surveyors, engineers, superintendents, and other artists and officers, as they shall deem necessary to carry on the intended work, to fix their salaries and wages, to ascertain the time, manner and proportions in which the said stockholders shall pay the moneys due on their respective shares, to draw orders on the treasurer: *Provided*, That such drafts or orders be signed by the President, or in his absence by a majority of the quorum present, and generally to do all such other acts, matters and

things, as by this act, and the by-laws and regulations of the Company, they shall be authorized to do.

SECTION 6. The President and Managers first chosen shall procure certificates or evidence of stock for all the shares of the said Company respectively, and shall deliver one such certificate, signed by the President and countersigned by the Treasurer, and sealed with the common seal of the corporation, to each person, for every share by him, her or them subscribed and held, he, she or they paying five dollars for each share, as aforesaid, which certificate or evidence of stock shall be transferable at pleasure, in person or by attorney, duly authorized, in the presence of the President or Treasurer, to be entered in a book to be kept for that purpose, subject however to all payments due or to become due thereon; and the assignee holding any certificate entered as aforesaid, shall be a member of the said corporation, and entitled to one share of the capital stock, and of all the estates and emoluments of the Company incident to one share, and to vote, as aforesaid, at the meetings thereof, and be subject to all the penalties and forfeitures, and of being sued for all the balance and penalty due or to become due on each share, as the original subscribers would have been.

SECTION 7. After thirty days' notice in the public papers aforesaid, of the time and place appointed for the payment of any proportion or instalment of the said capital stock, in order to carry on the work, any stockholder having neglected or refused to pay such proportion or instalment, at the place appointed, for the space of thirty days after the time so appointed, every such stockholder, or his assignee, shall, in addition to such instalment so called for, pay at the rate of two per centum per month for the delay of such payment; and if the same and additional penalties shall remain unpaid for such a space of time as the accumulated penalty shall become equal to the sums before paid in part and on account of such shares, the same shall be forfeited to the said Company, and may be sold to any person or persons willing to purchase, for such prices as can be obtained for the same; or in default of payment by any stockholder of any such instalment as aforesaid, the said President and Managers may, at their election, cause suit to be brought before a justice of the peace, or in any court having competent jurisdiction, for the recovery of the same, together with the penalties aforesaid: *Provided*, That no stockholders, whether original subscriber or assignee, shall be entitled to a vote at any election, or at any general or special meeting of said Company, on whose share or shares any instal-

ments or arrearages may be due and payable, more than thirty days previously to said election or meeting.

SECTION 8. It shall and may be lawful for the said President, Managers and Company, their superintendents, surveyors, engineers, artists and workmen, to enter upon the said river Monongahela, and upon the lands on either side, and to use the rocks, stones, gravel or earth, which may be found thereon, in the construction of their works, first giving notice to the owners or occupiers of the land, and to form and make, erect and set up any dams, locks, or any other device whatsoever, which they shall think most fit and convenient to make a complete slack-water navigation between the points herein mentioned, to wit, the city of Pittsburgh and the Virginia State line; and that the dams which they shall so construct for the purpose of slack-water navigation, shall not exceed in height four feet six inches; and that the locks for the purpose of passing steamboats, barges and other craft, up and down said river, shall be of sufficient width and length to admit a safe and easy passage for steamboats, barges and other craft, up as well as down said river. They shall make amends for any damages that may be done on said lands, and pay the owner or owners for the materials taken away, as well as for the land occupied in the construction of the said dams and water works: *Provided*, If the parties cannot agree, the said damages are to be valued by five disinterested freeholders, appointed by the consent of the parties; or if they cannot agree, by any disinterested justice of the peace of the proper county; and the report made by the freeholders so agreed upon, or appointed as aforesaid, or a majority thereof, shall be filed in the office of the Prothonotary of the county in which the land lies, and shall be regularly entered of record, which report being confirmed by the Court, judgment shall be entered thereon, and execution may issue in case of non-payment for the sum awarded, with reasonable costs, to be assessed by the Court; and it shall be the duty of the five freeholders aforesaid, in assessing the damages, to take into consideration the advantages derived to the owner or owners of the premises, from the said improvements hereby authorized: *Provided*, That either party may appeal to the Court within thirty days after such report may have been filed in the Prothonotary's office of the proper county, in the same manner as appeals are allowed in cases under the act entitled "An Act regulating arbitrations, passed the twentieth day of March, Anno Domini one thousand eight hundred and ten." *Provided further*, That before entering upon or occu

pying any lands, said Company shall give security, to be approved by the Court of Common Pleas of the county in which the land lies, to pay the amount of damages which shall be finally adjudged against them for such occupation or entry upon such land.

SECTION 9. That said President, Managers and Company shall have the privilege, and be entitled to use the water-power from the said river to propel such machinery as they may think proper to erect on the land which they may previously have purchased from the owner or owners; or may sell, in fee, lease, or rent, for one or more years, the said water-power, to any person or persons, on such terms as shall be most advantageous to the corporation: *Provided*, It may be so done that it shall not injure, impede or interrupt the navigation, and that the moneys arising from such sale of the water-power be applied to the use and benefit of the said corporation.

SECTION 10. So soon as twenty miles of the slack-water navigation shall be completed, the said President and Managers shall give notice thereof to the Governor, who shall thereupon nominate and appoint three disinterested persons to view and examine the same, and report to him in writing, under oath or affirmation, whether the said works have been so far executed in a workmanlike manner, according to the true intent and meaning of this act; and if at any time their report shall be in the affirmative, then the Governor shall, by license, under his hand and the seal of this Commonwealth, permit the said President, Managers and Company, or such persons as they shall from time to time appoint, to collect the tolls, which shall not exceed the following rates, to wit: That the President and Managers shall be entitled to take and receive the same rate of toll per ton, or otherwise, at their discretion, as the Schnylkill Navigation Company are entitled to receive under their act of incorporation: *Provided further*, That if at the expiration of two years after the said work shall have been completed, the tolls, together with the interest of the surplus of any money arising from the sales of water-power, or the rents and profits thereof, should enable the Company, after paying all repairs and other necessary expenses, to divide more than seven per cent. per annum on the capital stock expended, the tolls shall be so reduced that the dividends shall not exceed seven per cent., and shall so continue for five years; and if at the expiration of that time they shall exceed nine per cent. they shall be so reduced as not to exceed nine per cent., and shall thereafter be so regulated, from



time to time, as not to exceed nine per cent. per annum; and if at any time after the expiration of one year from the completion of the said work, the net profits aforesaid shall not amount to seven per cent. upon the money expended, it shall be lawful to increase the said tolls so as to divide seven per cent.: *Provided also*, That if it should be found at any time after the said Company goes into operation, that the profits arising from the sale, rent or lease of the said water-power, should amount to seven per centum per annum on the capital stock actually expended, then it shall not be lawful to demand or receive any toll at any of the locks aforesaid, but to permit all persons going up or down said river in boats, barges, or other vessels, to pass through said locks free of any toll, or other charges whatsoever.

SECTION 11. It shall be the duty of the commandant of any boat, barge or other vessel navigating the said river, when he shall arrive within one-fourth of a mile from any lock so erected, under the penalty of two dollars, to blow a horn or trumpet, or ring a bell; whereupon the keepers of such lock shall attend for the purpose of opening such gate or sluice, to let the said boat, barge or other vessel, pass without unnecessary delay, and in safety; and if any boat, barge, or other craft, shall be prevented from passing up or down any of the said locks or sluices, by reason of the lock not being raised, for more than thirty minutes, the President, Managers and Company shall, upon conviction thereof, forfeit and pay to the person so hindered, the sum of one dollar for every thirty minutes beyond the said time that he shall be so prevented, and in the same proportion for any longer or shorter time, and civil process in the proper county, and next to the place where the offence shall have been committed, shall be served by the owner or owners thus aggrieved, upon the aforesaid President, Managers and Company.

SECTION 12. If the President, Managers and Company shall neglect or refuse to keep in good order and repair any dam, lock, or sluice, of their own construction, or shall neglect to remove any obstacle which may occur therein, so that boats, barges, rafts, or vessels, cannot at all times safely navigate said river, when the same is not prevented by ice, or other unavoidable cause, they shall for every such offence pay the sum of fifty dollars, to be recovered in the same manner as debts of equal amount are or shall be by law recoverable—one-half to the use of the informer, and the other half to the use of the poor of the township or county where the neglect or refusal may occur.

SECTION 13. If any person or persons shall wilfully and knowingly do any act or thing whereby the navigation shall be impeded, or any dam, lock, gate or engine, machine or device, therein belonging, or any machinery or property of the Company shall be injured or damaged, he, she, or they so offending, shall forfeit and pay to the said Company double the damages by them sustained, together with costs, to be recovered by action of debt before any justice of the peace, or in any court of competent jurisdiction.

SECTION 14. The President and Managers of the said Company shall keep fair and just accounts of all moneys received by them from the said Commissioners, and from the subscribers to the undertaking, on account of the several subscriptions, of all penalties for delay in the payment thereof, and the amount of profits on the shares which may be forfeited as aforesaid; and also, of all moneys by them expended in the prosecution of the said works, and shall in every year submit such accounts to the stockholders at their annual meetings; and when the aggregate amount of such receipts and expenditures shall be ascertained, and upon such liquidation, or when the capital stock shall be nearly expended, it shall be found that the said capital stock will be insufficient to complete the said navigation, according to the true intent and meaning of this act, it shall and may be lawful for the said President, Managers and Company, at a stated or special meeting, to be convened for the purpose, to increase the number of shares to such extent as shall be deemed sufficient to accomplish the work, and to receive and demand the moneys for shares so subscribed, in like manner and under like penalties as are herein before provided, or as shall be provided by their by-laws.

SECTION 15. The President, Managers and Company shall keep a just and true account of all the moneys received by their several and respective collectors of tolls at the several and respective locks, and all moneys received for the rent or hire of the water-power, and all other emoluments, and shall make and declare a dividend of the clear profits and income thereof, among all the stockholders, in proportion to the stock held by each, all contingent costs and charges being first deducted; and shall, on the first Monday in January in each and every year, publish the dividend made of their clear profits, and the time when and the place where the same will be paid to the stockholders, not exceeding twenty days thereafter, and shall cause the same to be paid accordingly; and shall, on or before the first Monday of February in every year

after the incorporation of the Company, lay an abstract of the accounts of their receipts and disbursements before the Legislature, under oath or affirmation of the President and Company; and the said Company shall pay annually into the Treasury of the Commonwealth, a tax of eight per centum per annum on all dividends which may exceed six per centum on the capital stock actually paid in.

SECTION 16. Nothing herein contained shall at any time injure, destroy, or in any way impair any right, privilege, or legal claim which may have been granted to individuals by any act or acts of Assembly heretofore passed, for the purpose of erecting mill-dams on said river; but such persons as have mill-dams thereon, are hereby enjoined to have them constructed or raised to the same height as is prescribed in the eighth section of this act, at their own proper costs and expense, and also to build and erect a suitable lock or locks, and guard-wall, and the same to be inspected and approved of by the said President and Managers, or a majority of them, and to maintain and keep the same in perfect order and repair, to receive the same tolls, and be subject to the same penalties and forfeitures, and be liable to have process served on him, her, or them, in the same manner as the President, Managers and Company are subject to according to the provisions of this act; but if the owner of such privilege shall, for six weeks after notice given by said President, Managers and Company, neglect or refuse to construct or repair his or her dam, and make his or her lock in the manner prescribed by the Company, then the said Managers and Company shall have power to erect such dam and lock, and receive the tolls in the same manner as is provided in the tenth section of this act.

SECTION 17. If the said President, Managers and Company shall not proceed to carry on the said work within five years from the passage of this act, and shall not complete the navigation to the Virginia State line aforesaid, in seven years thereafter, according to the true intent and meaning hereof, then, and in either of those cases, all the rights, privileges, liberties and franchises hereby granted to said Company, shall revert to the Commonwealth: *And provided*, That in case of forfeiture by the Company, the owner or owners of any water-powers created by any dam erected by virtue of this act, shall be obliged to keep in perfect repair and good condition any dam or dams, lock or locks, connected with such water-power, under and subject to the same penalties as the Company originally were, and shall have the right to charge and receive the same tolls as the said Company had received;

and in case the owner or owners of such water-power shall neglect or refuse to keep the said dam or dams, lock or locks as aforesaid, in good order and repair, fit for the passage of boats, barges and other vessels, as the case may be, the Legislature may resume all and singular the rights, privileges, liberties and franchises granted by this act.

SECTION 18. It shall be lawful for the Commonwealth, at the end of twenty-five years from the completion of the work hereby authorized, to purchase the improvements made in pursuance of this act, by paying to the Company the original cost expended in the improvements, and the subsequent expenses, together with six per cent. interest thereon, deducting from the sum of principal and interest aforesaid, the dividend before declared by the said Company on the capital stock, and on the payment thereof by the Commonwealth to the said Company, in such manner and form as shall be agreed upon by the said Company, and by agents duly authorized by the Commonwealth, all and singular, the improvements aforesaid, with its appurtenances, water-rights and privileges, shall be vested in the Commonwealth, and the privileges and corporate rights hereby granted will thereupon cease and determine, excepting so far as the same may be necessary in the settlement of the concerns of said Company.

SECTION 19. No suit or action shall be brought or prosecuted by any person or persons, for penalties incurred under this act, unless said suit or action shall be commenced within six months next after the offence shall have been committed, or the cause of action have accrued, and the defendant or defendants in such suit or action may plead the general issue, and give this act and the special matter in evidence, and that the same was done in pursuance and by the authority of this act.

SECTION 20. The said Company shall not engage, directly or indirectly, in any banking, moneyed, commercial or manufacturing concern, or in the transportation or storage of any merchandise, lumber, coal, grain, flour, or other articles; nor shall they hold, erect, or own any other lands, buildings, wharves or docks, than such as are necessary and convenient for their business as a Navigation Company.

SECTION 21. That the said Company, hereby incorporated, be and they are hereby authorized and empowered to procure the right from the proper authorities of the State of Virginia, to extend the said improvements from the Pennsylvania State line, as far up the said river as the said Company may deem practicable: *Provided*, That the charter or grant which shall

be obtained from the said State of Virginia, for the purpose aforesaid, shall stipulate that no higher or other tolls or charges shall be made or exacted on so much of the said improvements as shall be located within the said State, than are permitted to be charged, by the provisions of this act, on that portion of the said improvements which shall be located in the State of Pennsylvania; and in default of such stipulation, within three years of the passage of this act, the Legislature of this Commonwealth reserves the right to make such alterations and additions to the charter hereby authorized, as may be deemed just and expedient.

APPROVED—The thirty-first day of March, Anno Domini one thousand eight hundred and thirty-six.

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Extract from the 6th section of an Act to repeal the State tax on Real and Personal Property, and for other purposes. Approved the 18th day of February, 1836.

“To the Monongahela Navigation Company, fifty thousand dollars, if the same be incorporated at the opening of the books of subscription for the capital stock thereof, and the further sum of fifty thousand dollars, as soon as one hundred thousand dollars subscribed by other persons, or bodies corporate, shall have been *bona fide* expended in the construction of said work.”

## RESOLUTION

Relating to the procuring and opening of Books for receiving subscriptions to the Stock of the Company for making a Lock Navigation on the Monongahela river.

WHEREAS, In and by an act of the General Assembly of the Commonwealth of Pennsylvania, entitled "An act to authorize the Governor to incorporate a Company to make a Lock navigation on the river Monongahela," approved the thirty-first day of March, one thousand eight hundred and thirty-six, it is made the duty of the commissioners therein named to procure and prepare Books for receiving subscriptions of Stock of said Company, on or before the first Monday of May, one thousand eight hundred and thirty-six; and whereas, the period of time between the passage of said act and the said first Monday of May was not sufficient to enable the said Commissioners to perform the duty so enjoined upon them; therefore,

*Resolved, by the Senate and House of Representatives of the Commonwealth of Pennsylvania, in General Assembly met,* That the said commissioners be and they are hereby authorized to receive subscriptions to the stock of said Company, in books which may have been opened at any time, in conformity with the directions contained in the said act; and all such subscriptions of stock shall be as valid, in all respects, as if the said books had been procured and prepared on or before the said first Monday in May.

APPROVED—The fourteenth day of June, Anno Domini one thousand eight hundred and thirty-six,

## A SUPPLEMENT

To an Act entitled "An Act to authorize the Governor to incorporate a Company to make a Lock Navigation on the River Monongahela."

SECTION 1. *Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania, in General Assembly met, and it is hereby enacted by the authority of the same,* That any defect or irregularity in the proceedings of the commissioners appointed by the act entitled "An Act to authorize the Governor to incorporate a Company to make a lock navigation on the river Monongahela," passed the 31st day of March, one thousand eight hundred and thirty-six, in taking subscription to and organizing the said Company; and any defect or irregularity in the proceedings of the Board of Managers of said Company, in organizing and conducting the affairs of the same, so far as the said defect or irregularity may have proceeded from the neglect or omission of the said commissioners and Board of Managers fully to comply with the requisitions of the proviso to the first section of said act, shall be and the same are hereby remedied and supplied; and the acts and proceedings of the said commissioners and Board of Managers, which were in contravention of the said proviso, shall be and are hereby declared valid and legal, as if the same had been fully complied with.

SECTION 2. The name, style and title of the said Company shall, from and after the passage of this act, be the "Monongahela Navigation Company."

SECTION 3. At all elections held by the stockholders, every person holding ten or any less number of shares, shall be entitled to one vote for every share so held; and one vote for every additional ten shares: *Provided,* That no number of shares shall entitle the holder thereof to more than twenty votes. And so much of the proviso, in the fourth section of the aforesaid act as conflicts with this section, shall be and is hereby repealed.

SECTION 4. The said Company shall be permitted to erect such dams as may be necessary for the construction of the said navigation, below Brownsville, to a height not exceeding eight feet from pool to pool. In selecting persons to assess damages occasioned by the construction of said navigation, no person shall be chosen who is a resident of any county through which the said improvement shall pass: *Provided,* That all the locks below the town of Elizabeth, in Allegheny county, on said river, be made one hundred and ninety feet long and

fifty feet wide, and that all the locks below the town of Brownsville shall be of like dimensions.

SECTION 5. When the said navigation, or any portion thereof, shall be completed, the President and Managers shall be entitled to receive such rates of toll per mile, at their discretion, as may be just and reasonable, subject, however, to the control and regulation of the Legislature, if at any time complaint should be made to the same: *Provided, always,* That the net dividends on said stock shall not exceed twelve per cent. per annum, and the said Company shall not be compelled to permit any boat or craft, except such as shall be hereinafter provided for, to pass toll free, unless the dividends amount to twelve per cent. per annum.

SECTION 6. The penalty inflicted on said Company by the eleventh section of said act, for detention in passing the locks or sluices, shall not be imposed unless occasioned by malice or culpable negligence on the part of the said Company, its officers or agents.

SECTION 7. The said Company shall be permitted to set apart, as a contingent fund for the purpose of defraying the expenses of extraordinary repairs, or other unforeseen expenditures to which said Company may become liable, the sum of twenty per cent. of their tolls, interest, rents or profits, annually, until the said contingent fund shall amount to fifty thousand dollars, but, in the annual abstract of its accounts laid before the Legislature, the amount of such contingent fund shall be fully set forth.

SECTION 8. In case the Commonwealth should at any time purchase the improvement, made in pursuance of this act and the act to which this is a supplement, then the Commonwealth shall pay to the Company such sum or sums of money as, together with the net dividends, shall amount to the expense incurred in constructing said improvements and keeping them in repair, with eight per cent. per annum interest thereon.

SECTION 9. The limitation of six months for the commencement of action, as prescribed in the nineteenth section of the original act, is hereby extended to one year.

SECTION 10. The Monongahela Navigation Company shall have privilege to purchase and hold such lands as may be necessary to the full use and enjoyment of the water-right secured to them by the original act.

SECTION 11. The time for obtaining a charter or grant from the State of Virginia, in relation to this improvement,



is hereby extended to the 31st day of March, one thousand eight hundred and forty-two.

SECTION 12. The sixteenth section, together with such other portions of the act to which this is a supplement, as are hereby altered and supplied, shall be and are from henceforth repealed.

SECTION 13. The Legislature reserves the right to alter, amend or annul the charter of said Company, at any time hereafter, in such manner, however, that no injustice shall be done to the corporators.

APPROVED—This twenty-fourth day of June, Anno Domini eighteen hundred and thirty-nine.

To Messrs. THOS. BAKEWELL, WM. EICHBAUM and WILLIAM WADE, *Committee of Board of Managers of the Monongahela Navigation Company:*

GENTLEMEN—Agreeably to your request, I herewith send a statement of the number of arrivals and departures of steamboats, &c., employed regularly in the Monongahela trade; in addition to which a number of steamboats have occasionally gone to Brownsville, &c., and a large number of flat-boats, loaded with coal, have descended the river without stopping at this port.

With respect, I am yours, &c.

THOMAS M'FADDEN, *Wharf Master.*

PITTSBURGH, Jan. 1st, 1840.

STEAMERS.

	Tons.	Voyages.	
Liberty.....	83	21	} Tons, 14,196
Franklin, ..	84	65	
Pike, .....	35	84	
Shannon,.....	77	43	
Ploughman,.....	38	58	
Royal,.....	68	29	
Excel,.....	41	13	
Exact, .....	61	3	

Traveller, }  
Ranger, } Running constantly, and employed in  
D. Crockett, } towing flats, rafts, &c.

686 Keels and flats loaded with produce,..... 9,482  
1,048 Flats loaded with coal, brick, &c., tonnage unknown,

Total tons,..... 23,678

THIRD  
ANNUAL REPORT  
OF THE  
PRESIDENT AND MANAGERS  
TO THE  
Monongahela Navigation Co.

*Presented January, 1841,*

WITH THE  
ACCOMPANYING DOCUMENTS.

.....  
SECOND EDITION.  
.....

PITTSBURGH:  
BAKEWELL & MARTENS, 71 GRANT ST. & 75 WOOD ST.  
1871.

## OFFICERS.



PRESIDENT.

THOMAS BAKEWELL.

TREASURER.

JOHN D. DAVIS.

SECRETARY.

THOMAS LIGGETT, JR.

MANAGERS.

W. EICHBAUM,

JOHN SHIPTON,

JOHN FREEMAN,

JOHN ANDERSON,

L. PETERSON,

J. L. BOWMAN,

JAMES MAY,

JOHN SNOWDEN. JR.,

J. W. BURBRIDGE,

JOHN F. KELLY.

TO THE STOCKHOLDERS  
OF THE  
Monongahela Navigation Company.

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IN presenting their third Annual Report, the Board of Managers regret their inability to announce the completion of any part of the works; although such progress has been made in the construction of locks and dams Nos. 1 and 2, and in procuring the materials requisite for finishing them, that the Board entertains no doubt of their being so far completed as to admit of the passage of boats early in the ensuing summer, pursuant to the hopes expressed in their previous report.

If the services of the late President, James Clark, Esq., could have been continued, or if the Chief Engineer could have devoted his personal attention to this object, the Board is convinced that by a diligent and constant supervision of the contractors on locks and dams Nos. 1 and 2, those works would have been far more advanced than they are, if not entirely finished.

The Board would respectfully refer to the accompanying Report of the Chief Engineer, for full particulars of the general progress and present situation of all the works upon the line of improvement, and the final location of locks and dams Nos. 3 and 4; together with the estimates of their cost, and the conditions of the contracts for their construction; merely observing, that to the best of their knowledge, the work has been faithfully executed, and with as much regard to economy, in all respects, as circumstances would admit.

In February last, it was resolved by the Board to apply to the Legislature for further assistance, and in March, it was

deemed expedient to secure the attendance of one of the members of the Board to represent the interests of the Company at Harrisburg, and endeavor to procure effectual aid to the work.

Mr. J. L. Dawson, of Brownsville, proposed to attend on behalf of the Company, on condition of the payment of his expenses, the amount of which (in all \$320) is included in this year's contingencies.

No decisive action was had upon this subject until the extra session, when Mr. Dawson returned to Harrisburg, and the Legislature included in the general appropriation bill a provision authorizing an additional subscription of two thousand shares of stock.

Soon after the passage of this Act, the Chief Engineer was directed to locate the locks and dams Nos. 3 and 4, and advertise for proposals for their construction. After examination of more than twenty bids, the lock and dam No. 3 was allotted to Messrs. Bills and Foreman, and lock and dam No. 4 to Messrs. Fenlon and Patton; under the condition that the work on the latter may be suspended, if the Company should not find it convenient to prosecute it to completion.

In consequence of this extension, it was found necessary to employ an additional Assistant Engineer, and Mr. G. W. Cass, of Brownsville, was appointed.

In the month of March last, Jas. Clark, Esq., tendered his resignation as President of the Company, in consequence of his appointment to a similar office in the Board of the Union Canal Company, but it was not accepted until October. Since that time the Board has been without a permanent presiding officer, and has sustained considerable inconvenience in consequence. The removal from the city of two members of the Board (Messrs. Wade and Taylor), has rendered it in some cases impossible to obtain a quorum, and delayed the transaction of the necessary business of the Board. To obviate this difficulty in future, it would be desirable to obtain such an amendment to the charter, as would enable the Board to supply any vacancies that may occur in its own body, until the next election.

Mr. S. VonBonhorst, late Secretary, having removed from the city, resigned his office, and his father, C. VonBonhorst, was engaged as Clerk for the remainder of the year.

After the State had subscribed for the increased amount of stock, the Board confidently relied upon deriving sufficient funds from that source to prosecute the work, without bearing hard upon the private stockholders. That calculation was however defeated, by the inability of the State Treasurer to meet the calls of the Board after the 23d of October, in consequence of the exhausted condition of the Treasury. Under these circumstances, the Board was compelled to resort to the subscription of the banks and individuals, to enable it to meet its engagements. To accomplish this, it became necessary to call in six instalments of five dollars per share, during the last year.

These calls have been generally met by the stockholders, with the exception of those persons who have contested the right of the Company to enforce the provisions of its charter, and refused to comply, under various pretexts, with their engagements. Against most of these persons, who reside in this county, suits have been instituted, and the Board is happy to say, that in every case which has hitherto been tried, judgment has been obtained in favor of the Company. Some of the parties appealed to the Supreme Court, but its opinion, as delivered by Judge Rogers, was such as completely to establish the validity of the amendments to the charter of the Company. The accounts of nineteen persons residing in Fayette county and holding seventy-eight shares of stock, have been placed in the proper hands for collection, by G. H. Bowman, Esq., of Brownsville.

The Board has been hitherto enabled to meet all the demands upon it with punctuality, and the tenth instalment, payable 15th January next, will defray the current expenses and estimates for the months of January and February, and probably March; but unless the instalments owing by the State can be collected in the spring, great difficulty will be experienced in procuring the funds necessary to prosecute the work.

The amount due by the State upon the first  
 subscription is..... \$ 5,000 00  
 And upon the second,..... 60,000 00

Making together,.....\$ 65,000

The United States Bank of Pennsylvania is by its charter bound to subscribe for one thousand additional shares of stock, say fifty thousand dollars, so soon as one hundred thousand dollars, subscribed "by other persons, or bodies corporate, shall have been expended in the construction of said work." By reference to the Treasurer's accounts, it will appear that the whole expenditure on the works, including salaries and contingencies, has been.....\$ 128,502 71

From which deduct am't. paid by U. S. Bank, 45,000 00

Leaves as the balance of expenditure,.....\$ 83,502 71

So that it will require collections to be made from individuals, or other corporations, to the amount of \$16,497.29, and the expenditure on the works of the same amount, before the bank can be called upon for its additional subscription. It is expected that the proceeds of the tenth instalment, together with the amount now in the hands of Mr. Bowman, at Brownsville, will at least amount to this sum, and consequently, the requisitions of the bank charter, so far as relates to this Company, will soon be complied with.

By reference to the accompanying accounts and statements of the Treasurer, it will appear that the total receipts of the current year amount to.....\$ 92,196 00  
 which have been received from the following sources :

State of Penn. on 1st subscription of stock,....\$ 10,000 00

Do. on 2d do. .... 30,000 00

U. S. Bank, 6 instalments on 1st subscription, 30,000 00

Monongahela Bank of Brownsville, on 4 do. 2,000 00

Individual subscribers in part of 6 instalms, 20,196 00

\$ 92,196 00

Add balance on hand 1st January last,..... 631 79

Makes together,.....\$ 92,827 79

From which deduct total payments for the  
current year, per Treasurer's account .....\$ 92,327 50

Leaves balance in the Treasurer's hands of....\$ 500 29

The expenditures of the Board may be classed under the following heads, for the items of which the Board would refer to the Treasurer's accounts, viz:

Engineer department for 1840, .....\$ 2,553 25

Construction of works,

Say Lock and Dam No. 1, \$29,215 72

Ditto No. 2, 34,341 45

Ditto No. 3, 5,795 30

Ditto No. 4, 8,358 99

Iron work in all,..... 4,845 00

Water lime,..... 5,095 50

87,651 96

Miscellaneous and contingent expenses,

Salaries of Pres't., Sec'y. & Treas'r \$1,150 00

Office rent, fuel and attendance,..... 310 00

Printing and stationery, including

the printing of last year's report, (\$84,) 185 43

Expenses of Manager at Harrisburg, 320 00

Expenses of Manager attending meetings, advertising, freight of water lime

to locks 3 & 4, and other contingencies, 156 86

2,122 29

Making as above,.....\$ 92,327 50

The total amount of receipts by the Treasurer since his appointment, per statement, is .....\$ 129,003 00

The total payments for the same time, per statement is..... 128,502 71

Leaving balance in Treasurer's hands, as above, \$ 500 29

N. B. Since making out the above, Mr. Bowman has advised the Treasurer of the receipt of about \$3,800, one thousand of which is from the Monongahela Bank of Brownsville, which is not included in his statement.



The Board begs leave to submit the following sketch of the resources of the Company, so far as can be ascertained, viz.:

First State subscription,.....	500 shares,	\$25,000 00
Second do. ....	2,000 "	100,000 00
U. S. Bank of Penn. first sub.	1,000 "	50,000 00
Monon'a. Bank of Brownsville,	100 "	5,000 00
Individual subscription,.....	1,562 "	78,100 00
		<u>\$258,100 00</u>

To which if the second contingent subscription of the U. S. Bank for 1,000 shares, or,..... 50,000 00 be added,

The sum total will be 6,162 shares, or .....\$308,100 00

On a considerable number of the above shares nothing has been received, and several of the subscribers have deceased, removed and become insolvent; which shares are forfeited to the Company, and will, according to the best information of the Board, amount to at least 302 shares, say, 15,100 00

Leaving, as the actual resources of the Company, 5,800 shares, or.....\$293,000 00

Subscribers holding about 300 shares have refused to pay the instalments. Against them suits have been brought for some of the instalments, and judgment obtained for about \$7,260. But as considerable delay will take place in collecting the above, the amount cannot be considered as available before the close of 1841, say..... 15,000 00 which, if deducted from the former sum, will leave ----- as the available resources of the year 1841, including the second State and Bank subscription.....\$278,000 00

The liabilities of the Company so far as they can be ascertained, may be estimated as follows :

Estimated cost of Locks and Dams 1, 2, 3 and 4, as per Engineer's report, herewith submitted,.....	\$283,590 20
	<u>\$283,590 20</u>

Amount carried forward..... \$283,590 20

Amount brought forward,.....	\$283,590	20
Payments for Engineering and contingencies to this day,.....	4,675	54
Estimated expenses of Engin's, &c., for 1841,	5,500	00

Making together,.....\$ 293,765 74

In the above estimates are included the payments made on the work, and the instalments received from the stock. The whole amount now owing on the several instalments already called for is, per statement. ....\$103,387 00

It will be seen that the above amount of liabilities rather exceeds the available resources of the Company, and it will be the duty of the successors of the present Board to determine whether, under present circumstances, the Company will be justified in proceeding farther with lock and dam No. 4; or, whether the provision in the contract with Messrs. Fenlon and Patton, which admits of the suspension of the work, shall be put in force. Should that decision be made, they will be entitled to the retained per centage on their work. It should also be observed, that the above estimate is independent of any claim that may be brought forward for damages at any of the sites of the locks and dams.

During the present embarrassed situation of the business community, and the continued pecuniary pressure, the Board cannot entertain much hope of obtaining from private subscription, or any other source, the funds requisite to complete lock and dam No. 4 (which, if finished, would raise the water at Brownsville, one foot in the channel of the river); nor for constructing lock and dam No. 5, even on the reduced scale suggested by the chief Engineer.

These subjects the Board leaves to the consideration of its successors, merely stating, that if any means could be adopted by which funds could be procured, by loan or otherwise, the advantages resulting from the completion of the work to Brownsville would be such as to warrant extraordinary exertions on its behalf.

The Board has seen no reason to change its views in rela-

tion to the importance of this work, not only to citizens of Pittsburgh and Brownsville, but to all who reside on the banks of the Monongahela between those two places. On the contrary, each successive season more deeply impresses the Board with the conviction, that this great work will not only prove beneficial to the stockholders, but will, both directly and indirectly, contribute more to the improvement and advantage of Southwestern Pennsylvania than any other work that has been projected.

The Board, in conclusion, beg leave to express their sincere hopes, that the wealthy inhabitants of the fertile and productive valley of the Monongahela will soon be awakened to their true interests, and by a moderate subscription of stock secure, beyond a doubt, the completion of this valuable improvement to Brownsville, during the year 1842.

All which is respectfully submitted.

THOS. BAKEWELL,

LEWIS PETERSON,

JAMES MAY,

*Committee of Board.*

## REPORT OF W. MILNOR ROBERTS, Esq.

Dated December 23d, 1840.

*To the President and Managers of the Monongahela Navigation Company :*

GENTLEMEN—I have the honor to present the following annual report upon the past operations and present condition of the Monongahela Navigation Company.

A description of the general character of the river, and of the country along its borders, and also a description of the plan of the proposed improvement, and of the several works connected therewith, having been given in my last report, it is not deemed necessary to recapitulate them here. It also contained a statement of the estimated work done at the close of the year upon locks and dams Nos. 1 and 2, the only works at that time under contract.

At the date of that report, it was anticipated that the two first locks and dams would be so far advanced this year, as to insure their completion in time for opening a portion of the navigation in the spring.

Although much has been accomplished during the past year, we cannot hope to finish the job referred to, before June or July next. It was late before the water was low enough to permit the laying of masonry ; but after that period (June) the season proved very favorable, and, with proper energy on the part of the contractors, who were constantly urged forward, these works might have been completed in time for the spring trade.

So far as the work has progressed, it has been well executed.

On the 15th July last, locks and dams Nos. 3 and 4 were disposed of to contractors—the third to Messrs. Bills and Foreman, and the fourth to Messrs. Fenlon and Patton. The work at No. 4 was let out conditionally, the Company reserving the right of suspending it entirely after a certain amount should be performed. The contractors in both cases were bound in a given penalty, to *commence* the work within a given period, and to complete the same according to the terms of the contracts. The contractors at No. 4 have finished all that was required for the present season. The work at No. 3 is not so far advanced. This may, *in part*, be attributed to the greater difficulty encountered in pumping out the water.

The site of lock and dam No. 3 was changed, under the authority of the Board, from Lobe's bar to a point a short distance below Watson's run, being about one mile from the *original* location; this will create no very material difference of cost.

The following is the estimated cost of all the work now done, viz.:

Lock and Dam, No. 1,.....	\$50,827 00
Lock and Dam, No. 2,.....	50,189 50
Lock and Dam, No. 3,.....	6,218 00
Lock and Dam, No. 4,.....	9,834 10
Cement (including \$105 for transportation),.....	6,825 00
Iron work,.....	6,745 00
	Total, \$180,638 60

The above sum total does not include the cost of surveys, engineering, salaries and incidental expenses, for which I respectfully refer the Board to Mr. Davis, the Treasurer.

The total estimated cost of all the work *under contract*, including *iron-work, water-lime, and lock houses*, is as follows, viz.:

Lock and Dam, No. 1,.....	\$77,590 40
Lock and Dam, No. 2,.....	79,603 10
Lock and Dam, No. 3,.....	62,712 10
Lock and Dam, No. 4,.....	64,285 60
	\$283,590 20

The above estimates are based upon the present contract prices. It should, however, be observed that the *lock-houses* included in them, and which are estimated at \$600 each, are not yet let out.

The following tabular statement shows the location of the locks and dams, and the total estimated cost, including lock-houses, water-lime and iron work.

### TABULAR STATEMENT.

#### *Lower Section of Navigation—to Brownsville.*

No. Lock and Dam.	Location.	Dist. from Pittsburgh in miles.	Length of Pool in miles.	Estimated Cost.
1	Near Pittsburgh,.....	1	10	\$77,590 40
2	Braddock's Ripples,.....	11	13	79,003 10
3	Watson's Run,.....	24	16	62,712 10
4	Frey's Shoal,.....	40	13½	64,284 60
5	Forsyth's Ripples,.....	52½	9	57,714 09
				\$ 341,304 29

#### *Upper Section—from Brownsville to Virginia Line.*

No. Lock and Dam.	Location.	Dist. from Brownsville.	Distance fr. Pittsburgh.	Length of Pool.	Estimated Cost.
6	Smith's Ripples,.....	6½	62	5½	\$50,681 78
7	Rice's Ripples,.....	12	67½	7½	49,510 30
8	Sharpneck's Ripples,.	19½	75	7½	47,600 20
9	Jacob's Creek Ripples,	27	82½	2½	46,020 40
10	Dunkard's do.	29	85	5½	46,010 52
				\$239,823 20	

Showing the total estimated cost from Pittsburgh to Brownsville, to be \$341,304.29; and the total estimated cost of the *whole work* to the Virginia line, to be \$581,127.49.

The present estimated cost of the line is \$5,688.11 more than the estimate of last year. This arises principally in consequence of a few of the prices in locks and dams Nos.

3 and 4, being higher than I had estimated previous to their allotment. Should we be able to obtain cement along the Monongahela river, the above estimate will probably be reduced more than two thousand dollars. We have had offers from gentlemen in Brownsville to furnish hydraulic cement; and I trust that an arrangement may be made with them. The raw material certainly abounds in the vicinity of Cookstown, and at other points, and I have understood that it has been manufactured in cement on the Youghiogheny river.

Owing to the present condition of the money market, and the uncertainty which exists in regard to the future, it becomes a question of some moment to the Company, as to the most advisable course to pursue in the further prosecution of their improvements. With a view of aiding the deliberations of the Board upon this subject, I have made out some statements which will have a bearing upon the question:

The total estimated cost of completing the four locks and dams now under contract, is \$283,590.20 (including lock-houses). The total estimated cost of work now done is \$130,638.69; the amount of work yet to be done to finish these works is, therefore, \$152,951.51. Should the Board not feel themselves warranted in proceeding further, at present, with lock No. 4, the amount of work to be done, would, in round numbers, be \$100,000. This latter sum, I suppose, they would feel themselves bound to provide for. In the event of suspending operations at lock and dam No. 4, I would respectfully recommend that the contractors be authorized to go on during the winter, so far as to provide the necessary *timber* for the lock and dam, with the understanding that no other work would be done until permission should be given. The cost of the timber, delivered, would be about \$8,100; then, if the Board thought proper to prosecute the work, they would be in a condition to do so, with a fair prospect of completing it in 1841; and from the known energies of the contractors, I believe we should not be disappointed.

## DETAILS.

*Lock and Dam No. 1.*

The contractors, Messrs. Moorhead, commenced laying masonry on the lock walls in the latter part of June, and suspended about the first of December. During that period they laid twenty-seven hundred and seventy-five perches of masonry, in all, three thousand three hundred and sixty perches. The contractors for this work have encountered much difficulty in regard to quarries, and in consequence of not urging it forward in the *early* part of the season.

As a natural result, they were thrown into low water, and compelled to carry a large portion of their stone at a great disadvantage—causing, at the same time, a serious delay.

Owing to the failure on the part of the sub-contractors on the Allegheny river, to convey their timber to the main stream in time for the first spring freshet, we were disappointed by the non-arrival of the timber for the *dam*. The usual June freshet failed entirely; and it was very late in the season, and not until the Board had recommended the most decided action, nor until that action was taken, that any timber (of consequence) was obtained. The framing the dam was not commenced until the 8th of September; after that date, the work was pushed forward with commendable industry. It could have been carried on some time longer, but the contractors were directed to leave it as it is, with a channel over one hundred feet wide, between the lock and the present termination of the unfinished part of the dam.

The abutment on the western side is two-thirds finished. Two hundred and thirty feet of the dam is completed, except the covering, which may be put on during the winter. Six hundred and sixty feet are raised to the square, averaging about five feet in height. All the work, so far as it is finished, is well filled with stone. The dam is *two thirds* done.



*Lock and Dam No. 2.*

Contractors, Messrs. Coreys & Adams. The masonry was commenced in the latter part of June, and discontinued about the 20th of November. During that time there were laid thirty-one hundred and forty-five perches; in all, thirty-three hundred and seventy.

The work at this lock has been carried on in a workman-like manner, and much has been accomplished; but *more* might have been done.

At the *dam*, they have made good, substantial work, and the contractors were prepared to extend it considerably further this season; but I directed them to leave it in its present state, in order that the navigation of the river might not be interfered with, and to prevent injury to the lock, which in its present unfinished state would be greatly exposed to the running ice and drift-wood, had the dam been extended much beyond its present limits. There is now an excellent and safe channel left, nearly two hundred feet wide, and the navigation is still as good as it was originally.

The abutment and two hundred and forty feet of the dam are finished, and four hundred and sixty feet in length completed, to one tie-timber above the square, averaging about six feet in height. This dam is also *two-thirds* done.

*Lock and Dam No. 3.*

The contractors, Messrs. Bills & Foreman, commenced quarrying on the 4th of August, and conducted that part of their operations very well. They were rather tardy in regard to their lock-pit, not having begun the coffer-dam until the 27th of August. The excavation was commenced on the 22d of September. They erected a horse-power pump at first, thinking it would answer the purpose, and be less expensive than an engine. (I was of the same opinion, and still think, that with proper management, they could have dispensed with it.) The acting contractor, however, afterwards concluded upon putting up an engine; and, from this cause, their work was

thrown back several weeks. The result is, that he has only finished the excavation, except under the sluice gates, and laid one-half of the foundation. He is, however, confident that they will succeed in getting the whole foundation done during the winter. This will depend upon the state of the river and the weather. They have stone enough quarried and cut for two courses, and the work is well done. The contract requires that they should have two courses laid at this time.

*Lock and Dam No. 4.*

Messrs. Fenlon & Patton are the contractors for this work. As mentioned in a preceding part of this report, this job was let out conditionally. The contractors were required to lay the foundation and two courses of masonry during the present season. They commenced quarrying August 3d; finished their coffer-dam and began to pump (with a horse-power machine) on the 18th of September; commenced laying masonry October 8th, and finished two courses, as required, on the 25th of November. Their work, from the beginning, was carried on with vigor, and it has been built in accordance with the specification.

Lock and dam No. 5 have not yet been put under contract. If constructed of the contemplated height, say eight feet from pool to pool, they will, when finished, complete the slack-water navigation to Sharpneck's, six and one-half miles above Brownsville.

It has been suggested, that as a considerable time may elapse before the improvement can be extended above that place, the stockholders residing there, and other citizens of that vicinity, would prefer that the dam No. 5 should not be built more than four or five feet high.

The principal argument adduced in favor of this opinion, are, that it would save a considerable sum in the construction of the work—that it would prevent the destruction of one mill at the mouth of Redstone, and another at the mouth of Dunlap's creek, and that the depth of water afforded by such

a dam at Brownsville, would be as great as is required by the citizens and others interested. I do not at present feel prepared to give a decided opinion upon the subject. But if it is reasonably certain that no dams are to be built above No. 5, for some years to come, such a modification as has been suggested may be highly advantageous, not only to the Company, but to every one interested in the early completion of this important work. The idea seems to be, that by adopting a plan of works at the proposed site, which will cost very considerably less than those contemplated, funds may be raised to prosecute the work, and complete the chain to Brownsville at *the earliest possible period*. Whereas, upon the old and more expensive plan, capitalists might be deterred from venturing. I respectfully submit the question to the Board for their consideration.

On the 16th of July last, the day after the letting of two additional locks and dams, the Board, at my request, sanctioned the appointment of G. W. Cass, Esq., as assistant engineer, to take the charge of them. He has since continued to act in that capacity, and has evinced much judgment in the fulfilment of the duties appertaining to the office. N. McDowell, Esq., continues to act as assistant engineer in the more immediate charge of the two lower works—visiting occasionally those above.

The early completion of the Monongahela Navigation is a most desirable object, and one worthy of extraordinary exertions to secure. The Board, in their last annual report, have set this forth in a strong light. The river, at present, is indeed “an uncertain and precarious navigation,” and it seems almost wonderful that there should be any difficulty in raising the comparatively trifling sum required to complete the “*lower section*,” to Brownsville. For the small sum of six thousand dollars (or a very little more) per mile, we can have a navigation unrivalled in this country, or perhaps any other, when we take into view the purposes for which it is designed. Such a real improvement should not be left to languish. A good

common road would cost almost as much ; our canals are constructed at *six times the expense*.

To the citizens of Pittsburgh, the connection with the Cumberland road at Brownsville, which this navigation will afford, must prove an important addition to their many other advantages. To the citizens of Brownsville and other towns along the river, and the great and flourishing country behind them, and to the owners of coal-lands along the river, this outlet will be invaluable.

And, if we are not all greatly deceived in the extent of the trade and travel which must necessarily pass through this communication, it will prove to the stockholders of the Company a source of sterling profit.

Respectfully submitted.

W. MILNOR ROBERTS,  
*Chief Engineer.*

ENGINEER'S OFFICE,  
Pittsburgh, December 23d, 1840. }

## TREASURER'S ACCOUNT.

MONONGAHELA NAVIGATION COMPANY,  
*In account with JOHN D. DAVIS, Treasurer.*

1840.	DR.
Feb. 18,	To cash paid am't warrant 78, favor James Clarke,.....\$ 200 00
“ “	To cash paid am't warrant 80, favor C. H. Kay & Co..... 3 50
“ “	To cash paid am't warrant 83, favor John L. Dawson,..... 100 00
“ “	To cash paid am't warrant 82, favor James Galbraith,..... 15 00
April 2,	To cash paid am't warrant 81, favor John Harper,..... 125 00
May 7,	To cash paid am't warrant 84, favor J. K. & J. B. Moorhead,..... 1,089 70
“ “	To cash paid am't warrant 85, favor Coreys & Adams,..... 3,253 80
“ “	To cash paid am't warrant 86, favor S. F. VonBonhorst, ..... 50 00
“ “	To cash paid am't warrant 87, favor N. McDowell,..... 500 00
“ “	To cash paid am't warrant 88, favor J. Bausman,..... 3 00
June 24,	To cash paid am't warrant 94, favor John L. Dawson,..... 220 00
“ “	To cash paid am't warrant 89, favor J. K. & J. B. Moorhead ..... 3,293 05
“ “	To cash paid am't warrant 90, favor Coreys & Adams,..... 5,770 99
“ “	To cash paid am't warrant 91, favor Nathan Harris,..... 1,012 00
“ 25,	To cash paid am't warrant 92, favor John Jones,.. ..... 2 00
“ 29,	To cash paid am't warrant 93, favor James Galbraith,... ..... 15 00
Aug. 14,	To cash paid am't warrant 96, favor J. K. & J. B. Moorhead,..... 5,013 94

Aug. 14,	To cash paid am't warrant 97, favor Coreys & Adams, .....	\$ 7,317 42
" "	To cash paid am't warrant 98, favor N. Harris,.....	1,558 25
" "	To cash paid am't warrant 99, favor George Gossin,.....	2,550 00
" "	To cash paid am't warrant 100, favor W. Milnor Roberts,.....	600 00
" "	To cash paid am't warrant 101, favor N. McDowell,.....	400 00
Sept. 26,	To cash paid am't warrant 102, favor J. K. & J. B. Moorhead,.....	5,380 50
" "	To cash paid am't warrant 105, favor Coreys & Adams, .....	8,096 59
" "	To cash paid am't warrant 106, favor George Gossin,.....	2,040 00
" "	To cash paid am't warrant 109, favor S. F. VonBonhorst,.....	100 00
" "	To cash paid am't warrant 104, favor Fenlon & Patton,.....	2,027 25
" 30,	To cash paid am't warrant 108, favor James Galbraith,.....	15 00
" "	To cash paid am't warrant 105, favor Bills & Foreman,.....	1,215 50
Oct. 1,	To cash paid am't warrant 107, favor J. Harper, rent,.....	125 00
" 23,	To cash paid am't warrant 110, favor John L. Dawson, .....	45 75
" "	To cash paid am't warrant 112, favor James Clarke,.....	250 00
" "	To cash paid am't warrant 111, favor N. McDowell,.....	300 00
Nov. 16,	To cash paid am't warrant 95, favor Craig & Grant,.....	11 00
" 17,	To cash paid am't warrant 113, favor J. K. & J. B. Moorhead,....	9,955 20
" "	To cash paid am't warrant 114, favor Coreys & Adams,.....	6,431 74
" "	To cash paid am't warrant 115, favor Bills & Foreman,.....	3,300 55
" "	To cash paid am't warrant 116, favor Fenlon & Patton,....	5,226 78
" "	To cash paid am't warrant 117, favor George Gossin,.....	255 00
Dec. 28,	To cash paid am't warrant 118, favor J. K. & J. B. Moorhead,.....	2,579 33

Dec. 28,	To cash paid am't warrant 119, favor Coreys & Adams,.....	\$ 1,966 05
" "	To cash paid am't warrant 120, favor Bills & Foreman,.....	1,279 25
" "	To cash paid am't warrant 121, favor Fenlon & Pattou,.....	1,104 96
" "	To cash paid am't warrant 122, favor Nathan Harris,.....	2,525 25
" "	To cash paid am't warrant 123, favor G. W. Cass,.....	465 00
" "	To cash paid am't warrant 127, favor N. McDowell,.....	264 00
" "	To cash paid am't warrant 124, favor John D. Davis' acc't,.....	290 29
" "	To cash paid am't warrant 125, favor John D. Davis' salary,.....	500 00
" "	To cash paid am't warrant 126, favor Charles Von Bonhorst, .....	50 00
" "	To cash paid am't warrant 128, favor James Galbraith,.....	15 00
" "	To cash paid am't warrant 79, favor Craig & Grant,.. ..	11 00
" 29,	To cash paid am't warrant 129, favor J. K. & J. B. Moorhead,.....	1,904 00
" "	To cash paid am't warrant 130, favor Coreys & Adams,.....	1,504 86
" "	To balance in Treasury,.....	500 00
		<hr/>
		\$92,827 79

## CREDITS.

Dec. 31,	By balance in treasury, 31 Dec. 1839, \$	631 79
" "	By cash received from Bank U. States,	30,000 00
" "	By cash received from Commonwealth of Penn'a, on first subscription,....	10,000 00
" "	By cash received from Commonwealth of Penn'a, on second subscription,..	30,000 00
" "	By cash rec'd from Bank of Browns- ville,.. ..	2,000 00
" "	By cash received from individuals,....	20,196 00
		<hr/>
		\$ 92,827 79

JOHN D. DAVIS,  
Treasurer M. N. Co.

PITTSBURGH, Dec. 31, 1840.

STATEMENT OF THE  
 NUMBER OF SHARES SUBSCRIBED, AND THE PAYMENTS MADE THEREON,  
 BY THE  
 STOCKHOLDERS OF THE MONONGAHELA NAVIGATION COMPANY,  
 Up to December 31, 1840.

STOCKHOLDERS.	Number of SHARES Subscribed.	AMOUNT OF STOCK.		AMOUNT OF INSTALMENTS.		
		AMOUNT OF STOCK.	Amount called for	Amount Paid.	Amount Due.	
Com. of Penn. 1st subscription,.....	500	25,000 00	22,500 00	17,500 00	5,000 00	
Do. do. 2d do. ....	2,000	100,000 00	90,000 00	50,000 00	60,000 00	
Bank U. States of Penn. ....	1,000	50,000 00	45,000 00	45,000 00	.....	
Mon. Bank of Brownsville,.....	100	5,000 00	4,500 00	3,500 00	1,000 00	
Individuals residing in Alleg'y Co.	948	47,400 00	42,660 00	23,177 00	19,483 00	
Do. do. Fayette do.	508	25,400 00	22,860 00	8,335 00	14,525 00	
Do. do. Wash'n do.	20	1,000 00	900 00	400 00	500 00	
Do. do. Indiana do.	10	500 00	500 00	500 00	.....	
Do. do. other places,	66	3,300 00	2,970 00	91 00	2,879 00	
W. Milnor Roberts, .....	10	500 00	500 00	500 00	.....	
<b>Total,.....</b>	<b>5,162</b>	<b>\$258,100 00</b>	<b>\$232,330 00</b>	<b>\$129,003 00</b>	<b>\$103,387 00</b>	



**STATEMENT OF EXPENDITURES**  
**MADE BY THE MONONGAHELA NAVIGATION COMPANY,**  
 Up to December 31st, 1840.

DESCRIPTION OF EXPENDITURES.	Expenses prior to commencement of Surveys.		Expenditures in 1838.		Expenditures in 1839.			Expenditures in 1840.			Total amount expended.
			Preliminary Surveys.	Miscellan's	Construction.	Engineer Department.	Miscellan's.	Construction.	Engineer Department.	Miscellan's.	
Compensation of President,....	326	68	.....	400 00	.....	.....	350 00	.....	.....	450 00	1,626 68
Do. Secretary,....	50	00	.....	200 00	.....	.....	100 00	.....	.....	200 00	550 00
Do. Treasurer,....	.....	.....	.....	300 00	.....	.....	500 00	.....	.....	500 00	1,800 00
Office Rent, Fuel & Attendant,	50	00	.....	150 00	.....	.....	170 00	.....	.....	310 00	680 00
Printing, Stationery, &c., &c....	9	50	.....	20 75	.....	.....	150 60	.....	.....	185 48	866 28
Compensation of Engineers,....	500	00	2,770 72	.....	.....	3,810 00	.....	.....	2,529 00	.....	9,609 72
Other expenses Eng. departm't,	.....	.....	936 44	.....	.....	172 87	.....	.....	24 25	.....	1,183 06
Lock and Dam 'A',....	.....	.....	.....	.....	18,987 72	.....	.....	29,215 72	.....	.....	48,203 44
Do. 'B',.....	.....	.....	.....	.....	8,324 40	.....	.....	34,341 45	.....	.....	42,675 85
Do. 'C',.....	.....	.....	.....	.....	.....	.....	.....	5,795 30	.....	.....	5,795 30
Do. 'D',.....	.....	.....	.....	.....	.....	.....	.....	8,358 99	.....	.....	8,358 99
Iron work for Works,.....	.....	.....	.....	.....	1,045 65	.....	.....	4,845 00	.....	.....	5,890 65
Water Lime do. ....	.....	.....	.....	.....	1,625 00	.....	.....	5,095 50	.....	.....	6,720 50
Contingencies,.....	.....	.....	.....	.....	.....	.....	81 13	.....	.....	476 86	557 99
Copies of Drawings Mon. River,	134	25	.....	.....	.....	.....	.....	.....	.....	.....	184 25
Total,.....	1,070	43,3,707	161,070 75	.....	24,992 77	8,982 37	1,851 78	187,651 96	2,558 25	122 29	128,502 71

By balance remaining in Treasury 31st December, 1840,.....\$500 29

JOHN D. DAVIS, Treasurer.

PITTSBURGH, December 31, 1840.

FOURTH  
ANNUAL REPORT

OF THE

PRESIDENT AND MANAGERS

TO THE

Monongahela Navigation Co.

*Presented January, 1842,*

WITH THE

ACCOMPANYING DOCUMENTS.

.....  
SECOND EDITION.  
.....

PITTSBURGH:

BAKEWELL & MARTENS, 71 GRANT ST. & 75 WOOD ST.

1872.

## OFFICERS.

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PRESIDENT—WILLIAM EICHBAUM.

TREASURER—JOHN D. DAVIS.

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### MANAGERS.

E. HUGHES,	W. F. COPLAN,
G. W. CASS,	J. L. DAWSON,
J. F. KELLY,	J. FREEMAN,
JAMES MAY,	L. PETERSON,
J. P. BAKEWELL,	JOHN SHIPTON.

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SECRETARY—T. LIGGETT, JR.

TO THE STOCKHOLDERS

OF THE

MONONGAHELA NAVIGATION CO.

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THE Board of Managers of the Monongahela Navigation Company, in compliance with their duty, beg leave to submit their fourth Annual Report of the progress and condition of the works under their direction; and it is with great pleasure they are now enabled to announce the completion of locks and dams Nos. 1 and 2, affording a slack water navigation for more than twenty miles above this city.

The state of the Improvement, as far as it has progressed, is so satisfactorily detailed in the Report of the Chief Engineer, herewith submitted, that little is left to say on the subject in this Report. A statement, however, showing the cost of construction up to this time, and the liabilities of the company for the same, may with propriety be here introduced and which is as follows, to wit:

Estimated cost of work now done	
on lock and dam No. 1,.....	\$71,557 50
On which there has been paid,...	60,824 38
Leaving unpaid,.....	————— \$10,733 12
Estimated cost of work now done	
on lock and dam No. 2, ..	\$69,645 50
On which there has been paid, ..	59,213 88
Leaving unpaid, .....	————— 10,431 62
Carried forward,.....	————— \$21,164 74

Amount brought forward,.....	\$21,164 74
Estimated cost of work now done on lock and dam No. 3,.....	\$30,451 12
On which there has been paid,...	25,230 75
Leaving unpaid,....	5,220 37
Estimated cost of work now done on lock and dam No. 4,.....	\$22,880 60
On which there has been paid,...	22 226 36
Leaving unpaid,.....	654 24
<b>Making the total amount of liabilities .....</b>	<b>\$27,089 95</b>

To meet which, the available resources of the company are as follows, to wit :

Pennsylvania 5 per cent. stock, (due 1870,).....	\$18,400 00
From which deduct $\frac{1}{4}$ , reducing it to its supposed present value,.....	4,600 00
	<u>\$13,800 00</u>
Balance due by individual stock- holders,.....	\$30,019 00
From which deduct amount due by insolvents, &c.....	15,000 00
	<u>15,019 00</u>
Balance of deposit in office of B. U. S. at Pittsburgh,.....	\$287 00
From which deduct 40 per cent.	115 00
	<u>172 00</u>
Proceeds of timber sold, .....	1 300 00
Due by sundry individuals for tolls,...	281 50
Cash on hand,.....	68 60
	<u>\$30,640 50</u>
<b>TOTAL, . . . . .</b>	<b>\$30,640 50</b>
<b>From which deduct liabilities, .....</b>	<b>27,039 35</b>
	<u>\$3,601 15</u>
<b>Will leave the amount of available resources,.....</b>	<b>\$3,601 15</b>

Should locks and dams Nos. 1 and 2 continue in good condition during the present year, and yield tolls in the same pro-

portion as received from that source since they were finished, up to the present time, the sum of about \$7,000 more may be calculated on, and be added to the available resources of the company, and prove sufficient to repair and finish work which it may be found necessary yet to have done, and thus sustain themselves without other aid.

While on the subject of locks Nos. 1 and 2, it may be the proper time to remark that they are not of sufficient height, as the recent rises in the river have shown. They have been twice submerged since their completion; and it is respectfully recommended that they should be raised about six feet higher, as soon as it is found practicable so to do.

From the foregoing statement of the condition of the funds of the company, it is obvious that additional means for the further prosecution of the work must be had before it can be made useful for the purposes designed, and pay interest on the capital expended. How to obtain further aid is a matter which must be left to the consideration of our successors; but before quitting this subject, it may be proper to suggest the propriety of the company making application to the Legislature for further aid in the event of a general appropriation bill being brought up during its present session. The interest the State now has in the work, makes it an object to her to lend additional assistance in so valuable and important an improvement. Results to the present time, of the tolls received, give an assurance of its being better stock than that of any similar work in the country. In common with the rest of the Union, this section of it feels the effects of financial embarrassment; but it is believed that better times are about to dawn upon us, and with the return of public confidence and general prosperity, the slack water navigation of the Monongahela will soon be completed to Brownsville.

The Report of the Treasurer of the company is also submitted, which has been examined by a committee from the Board of Managers, and found to be correct.

Owing to the failure of the U. S. Bank of Pennsylvania, that institution has refused to make her second subscription

of \$50,000 on the stock of the company, as by her charter she was bound to do. This sum added to the amount due by individual delinquent subscribers, has caused, for the present, a suspension on the work of locks and dams Nos. 3 and 4. The amount of work done on these locks and dams is considerable, (for an account of which see the Engineer's Report,) and a large quantity of material is prepared for continuing the work on them. As the timber is perishable in its present condition, another inducement is presented for continuing the work, to prevent loss by its decay.

As soon as it was ascertained that no more work would be done for the present on locks and dams Nos. 3 and 4, immediate measures were taken to have the timber hauled out of the river and placed on high ground, to prevent its being carried off by freshets, and thus a large quantity of timber will be preserved for future operation.

Of the subject of damages done, owing to back water caused by the erection of dam No. 2, Mr. Thomas Graham has set up a claim against the company for backing the water over his mill dam on the Youghiogheny. Mr. Adam Coon has likewise informed the company that his water power, about one mile above Mr. Graham, is impaired in consequence of back water from the same cause, and asks redress. A committee has been appointed by your board to ascertain the extent of damage done to those mills, and report the result of their observation as soon as they shall have made the necessary examination. This duty will be performed so soon as time can be had from the pressure of business incident to the season of the year.

Before closing this report, the board believe they may safely say, that few undertakings of the character of the Monongahela Navigation Improvement have been so successfully prosecuted, and have exceeded so little the original estimated cost, as this has done. The strictest economy has governed the several boards of managers in the discharge of their duty since the commencement of the work, as may be seen by an examination of the Treasurer's Reports.

— Experience has shown that the charter of the Company is defective, and requires amendment, and as the Legislature is now in session, a proper time is afforded for having the necessary amendments made.

When James Clarke, Esq., retired from the company's service as president, Thomas Bakewell, Esq., was elected in his stead, at the last annual election. Imperative circumstances of a private nature called that gentleman to Europe in the fall, and the board was again left without a presiding officer; and as the charter only provides for the election of a president at its annual election, in January, a president *pro tem.* was elected by the board for the remainder of the year.

To enable the Board of Managers to conduct the affairs of the company under properly constituted officers, it is recommended to have the charter so amended as to enable the board at any time to fill vacancies out of its own body, or otherwise.

Another provision is also much needed in the charter. It is for the punishment of persons wilfully and maliciously doing damage to the works of the company, and using violent means to effect a passage through the locks without paying the established tolls. An instance of an attempt to commit such an outrage has occurred, and the safety of the work, and the preservation of good order at the locks, call loudly for such amendment to the charter as will protect the company in its rights.

In conclusion, a few remarks upon the importance of this work, when finished, may not here be considered out of place. Nothing need be said in favor of it to those acquainted with the region of country through which the Monongahela meanders, from its source to its junction with the Allegheny, but to those unacquainted with the country between here and Brownsville, it may be proper to say, that few sections of the United States can boast of so many natural advantages to make a people happy and wealthy as this. It abounds in all the minerals used for manufacturing purposes, of an excellent quality. Has exhaustless beds of the best bituminous coal



for steam power and the manufacturing of iron, and many valuable water seats for mills. As a grain and stock growing country, it is not excelled by any portion of Western Pennsylvania.

It is beautifully diversified by hill and dale, and no people enjoy better health than those living in this favored region. An improvement, therefore, like the present, must be invaluable to an industrious agricultural and manufacturing community, who can raise produce, and manufacture, to an unlimited extent, but lack the means of getting to a good market, excepting once a year for a few weeks in the spring, when the market is glutted and prices at the lowest. How great, then, the advantage, when this Improvement shall be completed, over the condition of things before it was undertaken! The farmer and the manufacturer may then come to market when they please, and avail themselves of the highest market prices. In addition to these advantages, the Improvement will form an important link in the chain of communication between the country west of the mountains and the sea board.

It will bring the navigation of the eastern and western waters into closer proximity than any other route across the Allegheny mountains, and will draw a very great portion of the carrying trade, both on account of the cheapness of the route, and being less liable to obstruction from ice in the spring and fall, than any of the more northern routes. When the Baltimore and Ohio Rail Road shall be completed to Cumberland, Md., which it is believed will be in the latter part of next summer, the traveller can perform a trip to Baltimore or Philadelphia, in about twenty-four or thirty hours from this place. Such then are the benefits to be expected from the slack water navigation of the Monongahela river, and it is hoped that every exertion will be made by those interested in this valuable improvement, to procure the means necessary for its final completion.

All of which is respectfully submitted.

WM. EICHBAUM,

January 3d, 1842.

*President, pro tem*

# REPORT

OF

W. MILNOR ROBERTS, Esq.

Dated December 18th, 1841.

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*To the President and Managers of the Monongahela Navigation Company:*

GENTLEMEN:—In presenting my fourth annual report upon the Monongahela Improvement, it affords me great satisfaction to state that locks Nos. 1 and 2 were opened for navigation on the 18th of October, and that they have continued in regular use since that period, answering, in every respect, my most sanguine anticipations.

The work connected with these locks, and the dams adjoining, is not yet entirely finished, but so nearly so, as to warrant the assurance that the navigation will be uninterruptedly maintained, whilst the river continues unobstructed by ice.

The successful completion and trial of this important portion of the great undertaking in which you have embarked, has fully established its claims to public patronage, and points practically, and in the most emphatic manner, to the necessity of further exertion on the part of its friends to secure the immediate completion of the line to Brownsville. It can no longer be considered an untried experiment, or a work of doubtful expediency, its benefits being palpable, and its success certain. During the brief period that the two locks have been in operation, the tolls received have been at the rate of about one thousand dollars per month, although the tariff or rates, as at present arranged, present a very moderate tax upon the trade.

The truth is, that the business of the Monongahela river,

derived from the coal trade, and the agricultural and mineral products of Allegheny, Westmoreland, Washington, Fayette and Greene counties, and the north-western counties of Virginia, is of immense magnitude; so that when the whole improvement is brought into use, a merely nominal tax upon it will be found to yield a respectable interest upon the capital invested.

It is unfortunate that this valuable enterprise started at a time of such universal pecuniary embarrassment; as it cannot be questioned that this circumstance has greatly retarded its progress and withdrawn from it the public favor. But a great point has been gained. Its original and warm friends are now satisfied that their brightest anticipations were well founded—the luke-warm have become more active, and the voice of the croaker is almost silenced.

In addition to the ordinary difficulties incident to the times, this company, during the past season, has labored under the most serious inconvenience in consequence of the failure of the United States Bank to subscribe the additional amount of fifty thousand dollars required by its charter. This, added to the disappointment of the Commonwealth in regard to the loans provided under the law of May last, has cut off a large portion of the anticipated resources, and forced the company to a curtailment of their expenditures.

The board were reluctantly compelled last spring to order a suspension of the work at lock and dam No. 4 (at Frey's Shoal,) and, in consequence thereof, a final estimate was made in June, by which it appears that the total amount of work done, exclusive of water lime furnished, was \$22,830.50. Between four and five hundred dollars have since been expended in hauling out, piling and securing the timber and other materials.

The total estimated cost of lock and dam No. 4, is \$67,834.60. More than one-third of the work has therefore been accomplished. It must, however, be obvious, that a suspension, for any considerable period, of works of this character will necessarily increase the cost of construction. In estimating, therefore, the eventual cost at this point, something has been added to cover this contingency.

The foundation of the lock is secured and planked, and two courses of substantial masonry, comprising 993 perches, are laid. Quarries for the walls and for stone filling have been opened, and a large quantity of timber for the dam has been delivered; so that the work is in a favorable situation

for the resumption of operations. The longer this is delayed the greater will be the final cost, as it is well known that timber piled together and constantly exposed to the elements rapidly decays.

Owing to the causes above enumerated, the board, on September 13th, directed a suspension of work on lock No. 3, (at Watson's run,) to take place upon the completion of the fourth course of masonry and the pier head then in progress, and the contractors were notified accordingly. They had previously, (June 14th,) been directed to suspend all operations connected with the *dam* until their work at the lock should be in a more advanced state—at the time of the notification not having laid the first stone. The laying of the masonry was commenced July 8th, 1841.

An estimate has just been made, from which it appears that the amount of work done, exclusive of water lime furnished, is \$30,451.12

There are four courses of masonry laid, containing 1947 perches, and a large portion of the stone for the remainder of the walls is quarried and cut, immediately opposite Elizabethtown—two miles, by water, from the site of the lock. Several quarries have been opened, and a part of the stone filling taken out, and a considerable portion of the timber for the dam has been delivered. This has been drawn out and secured, except a lot which was sold to Mr. Walker. It is, of course, liable to depreciation and injury to the same extent as that at dam No. 4

The estimated amount of work yet required to complete locks and dams Nos. 3 and 4, is \$81,580 18.

As stated in a preceding report, the fourth dam, at the contemplated limit of eight feet, will create an *additional* depth of one foot in the pool at Brownsville. This could be increased to two feet at a very trifling expense, and thus afford a respectable navigation, at the lowest stage of the river, without dam No. 5.

This sum of \$81,580.18, then, represents the additional amount, over and above other liabilities, required to effect a slackwater navigation to Brownsville. It is to be hoped that a company that has already expended two or three times this sum, and with only two locks in use is receiving tolls at the rate of ten or twelve thousand dollars per annum, will be able to obtain this trifling amount.

#### *Lock and Dam No. 2.*

The masonry of the lock, and the pier-head are finished.

There is a small amount of work connected with the cribs outside of the lock walls, and the closing of a gap of sixty feet in width in the upper part of the dam, and some incidental work yet to be effected before the contract can be considered completed; but, for all purposes connected with a regular navigation through the lock, it may be considered as done. I directed the contractors to close the gap in the dam by means of a semi-circular coffer dam, of cheap construction, to be thrown around the space, and furnished them with a plan and the requisite instructions for carrying it into effect. They, however, thought proper to try another expedient, which failed, and the river immediately after rising, prevented them from further operations for the time being. Should the water fall to a low stage, during the winter, they can still complete the work before the ice breaks up in the spring.

The board are perhaps aware that the main crib-work of the dam extends across the gap, and that the cribs, and part of the space above, are filled with stone, to prevent undermining; so that there remains only the sloping part to be added. The recent flood, which rose to the height of seven feet above the comb of the dam, does not appear to have done any injury.

#### *Lock and Dam No. 1.*

All the work at this point is now finished except a portion of the gravelling of the dam, a small embankment, and some incidental work about the lock, cribs, &c., and the navigation is complete.

The following is the estimated cost of the work now done, viz:

Lock and Dam No. 1, [A].....	\$71,557 50
Lock and Dam No. 2, [B].....	69,645 50
Lock and Dam No. 3, [C].....	30,451 12
Lock and Dam No. 4, [D].....	22,880 60
Cement,.....	10,712 19
Iron Work.....	8,431 15
<b>TOTAL,.....</b>	<b>\$213,678 06</b>

This does not include the cost of surveys, engineering, salaries, miscellaneous and incidental expenses, which will be contained in the report of the Treasurer.

The total estimated cost of the four locks and dams,

including iron work, water-lime and lock-houses, is as follows, viz.:

Lock and Dam No. 1, [A] .....	\$82,627 50
Lock and Dam No. 2, [B] .....	81,665 00
Lock and Dam No. 3, [C] .....	67,077 30
Lock and Dam No. 4, [D] .....	67,834 60

TOTAL,.....\$299,204 40

This estimate is based upon the present contract prices, with an allowance to cover the anticipated increased cost occasioned by the suspension of work.

If to this be added the sum of \$57,714.09, the estimated cost of lock and dam No. 5, it will give a total of \$356,918-59 on the *construction of work*, to effect a complete slack-water navigation to Smith's ripples, six and a half miles above Brownsville, constituting the *lower section* of the Improvement.

The estimated cost of the *upper section*, thence to the Virginia line, is \$239,823 20.

Damages to property along the river are not included in any of the foregoing estimates.

It has been stated that locks Nos. 1 and 2 were opened for use on the 18th of October, but the company did not charge toll until the 25th, many vessels, during that week, were passed through free of charge.

Some idea of the extent of the trade to be anticipated upon the completion of this improvement may be inferred from the fact that during *eight weeks* of the period the present works have been in operation, there have passed through locks No. 1, on the *descending* trade 354 boats and flats, loaded with coal; 38 steamboats, and 155 keels and other craft, loaded with brick, lime, glass, produce, &c., and on the *ascending* trade 34 steamboats and 355 keels, flats, &c., making a total of 936 vessels of all descriptions, passed. This does not include the steamboats 4 in number, which are constantly engaged in *towing* other craft, which, if added, would make the aggregate number of passages to exceed *one thousand*.

The amount of coal carried through the lock in this brief period, does not fall short of 1,260,000 bushels, or 41,500 tons.

In regard to the consumption of coal along the valley of the Ohio, there are some interesting facts given in a recent work entitled, "Cincinnati in 1841." After some general remarks the author proceeds thus: "It will be obvious, under

“these circumstances, that a very large quantity of coal must be consumed in this city (Cincinnati). The sales from the coal yards, during the last year, were *nine hundred and thirty thousand bushels*, and the probability is that the supplies, taken from boats on the river, which sell on their own account, would swell this amount almost or quite to *one million bushels*, as the annual consumption for small manufacturing establishments and private families in the city. To this must be added the quantity required in the large iron works, city water works, &c., which I estimate to be as much more, at least; one establishment alone consuming *ninety-five thousand bushels* of this article in a year.”

“For this supply of coal the market depends principally on the regions of the Monongahela and Youghioghenv,” (the trade from which passes through two locks on the Monongahela.) “and the neighborhood of Wheeling.”

Here we have something tangible, as a nucleus around which to frame a calculation of the future greatness of the trade of this favored region, and from which the opinion must be deduced, inevitably, that the stock of the Monongahela Navigation Company is destined to rank amongst the best in the country.

It has been ascertained that the coal consuming districts of Great Britain use annually about one ton to each inhabitant. In Cincinnati, according to the foregoing statement, it exceeds one ton to each inhabitant; and there can be no doubt that in Pittsburgh the proportion annually consumed is very considerably greater. The quantity used in Cincinnati would load four hundred vessels, containing five thousand bushels, or one hundred and fifty tons, each.

Other cities along the great western waters, (and especially New Orleans,) consume a large amount of coal, and the demand is gradually increasing. Now one effect of this improvement of the river is, to *reduce* the cost of coal delivered at its mouth, which necessarily has a direct tendency to extend its use. In addition to the quantity used in the cities and towns, we have an immense and increasing consumption by the numerous steamboats on the Ohio.

An idea may be formed of the magnitude and rapid increase of the trade on this river from the following abstract, taken from a report of the “Louisville and Portland Canal Company,” made December 1st, 1839.

## ABSTRACT OF BOATS, TOLLS, &amp;c.

Year.	Steam-boats.	Flat and Keel boats	Tons.	Amount Rec'd.
1831	406	421	76,323	\$12,750 77
1832	453	179	70,109	25,756 12
1833	875	710	169,885	60,736 92
1834	938	623	1+2,000	61,848 17
1835	1 256	355	200,413	80,163 24
1836	1,182	260	188,220	88,343 23
1837	1,501	165	242,374	145,424 69
1838	1,058	438	201,750	121,107 16
1839	1,666	578	300,406	180,364 01
	9,335	3,729	1,605,680	\$776,496 31

The season of 1838 was remarkably dry, and the navigation of the Ohio was impeded for many months, which accounts in part for the decreased trade of that year, but it is evident, from a glance at the table, that the *general business* is rapidly augmenting. This canal is only about two miles in length, and in eight years the tolls upon it have increased from \$12,750.77 to \$180,364.01—an annual *income* exceeding one-half of the *whole cost* of the Monongahela improvement to Brownsville.

The importance of connecting this work with the National Road at Brownsville has been frequently adverted to. That point once attained a large proportion of the business and travel which now pass to Wheeling, will, of necessity, be impelled into this channel, as the most natural, the *easiest*, and the *cheapest* route; and the additional tolls arising therefrom will soon enable the company to prosecute the remainder of the line to Virginia.

The trade of the flourishing region along the Monongahela river, in the vicinity of Brownsville, naturally tends in this direction, but, owing to the absolute want of a navigation for months, it is distracted and turned off at a greater cost to other points. It is believed that the citizens up the river are awake to their true interests in this matter, and may we not hope that the evidence of success which marks the present position of this company will induce them to rouse their best energies in your behalf, and not permit a work so well



begun to languish, when so very trifling a sum will bring its benefits to their thresholds!

The Commonwealth too has a large investment already at stake, and her true interests will be consulted by aiding the company to proceed to *immediate completion*. The capital which now lies worse than idle, in the unfinished locks and dams, may thus, and only thus, be resuscitated, and the whole investment rendered profitable.

Should the small amount required to finish locks and dams Nos. 3 and 4 be obtained during the present winter and spring, a slack-water navigation to Brownsville may be effected in the year 1842, the period named in the last annual Report of the Board.

In consequence of the suspension of a part of the work, it becomes necessary to discontinue the services of G. W. Cass, Esq., Assistant Engineer; and a communication to that effect was handed to the Board in June last. In separating officially from that gentleman, I may be permitted to express my high approbation of the excellent judgment, skill and attention which marked his course whilst connected with this improvement, and to express my regret for the loss of his services.

N. McDowell, Esq., continues in the discharge of his duties as Assistant Engineer, having providentially recovered from the severe injury he received upon the occasion of passing the first steamboat through lock No 1.

It may not be amiss to mention the fact that the new steamboat *Mentor*, built at Elizabethtown, passed through the lock. She is 180 feet long on deck, and 48 feet wide at the greatest breadth, across the guards. It was observed, whilst passing the lock, that she came very near fitting the chamber, clear of the swing of the gates. The lock chambers are 190 feet long and 50 feet wide, but owing to the space lost in opening the gates, vessels materially larger than the *Mentor* could not pass. This steamboat is much larger than any that are regularly engaged in the Pittsburgh trade.

I trust that the Board fully unite with their Engineer in the conviction of the vast importance of this navigation to the intelligent community whose interests are so deeply connected with this company's success, and that you will be better able to impress upon the minds of the Stockholders the necessity and sound policy of *immediate completion* to Brownsville. In conclusion, I may be permitted to express a very decided opinion, founded upon incontrovertible evidence already exhibited, (although entertained from the be-

ginning,) that this work will be entirely successful, and that the tolls will soon yield a handsome return upon the capital; I sincerely believe, and could almost venture the prediction, that its ultimate benefits will be so apparent, at no distant day, as to lead to a similar improvement of the Ohio.

When that magnificent project is perfected, Pittsburgh will unquestionably stand upon a high pinnacle, in a commercial point of view, and be without the reach of rivalry.

Respectfully submitted.

W. MILNOR ROBERTS,  
*Chief Engineer.*

ENGINEER'S OFFICE,  
Pittsburgh, December 18th, 1841.

## REPORT OF COMMITTEE

**TO WHOM THE TREASURER'S ACCOUNTS FOR THE YEAR 1841 WERE REFERRED.**

The Committee to whom were referred the Treasurer's Statement, beg leave to report, that they have examined his account of Receipts and Disbursements and find the same to be correct.

The Account Sales of the State Stock have been submitted to them, and the proceeds found to correspond with the amount credited to the Company.

The Committee would recommend the drawing of a warrant on the Treasurer, (to be paid out of the first moneys that may come into his hands,) in favor of J. D. Davis, Esq., for one thousand dollars, being the sum loaned by the latter to the Treasurer of the Company, as appears by his statement.

The Committee avail themselves of this opportunity to express their approbation of the correct and satisfactory system upon which the Treasurer's books are kept; exhibiting at any moment the actual state of the financial, and other matters that come under the supervision of the Treasurer of the Company.

JOHN F. KELLY,  
J. W. BURBRIDGE.

PITTSBURGH, Dec. 29th, 1841.

## TREASURER'S ACCOUNT.

**MONONGAHELA NAVIGATION Co.,**

*In Account with* JOHN D. DAVIS, Treas'r.

		<b>DR.</b>
1841.		
March 20,	To cash paid amount warrant 131, favor Nathan M'Dowell,.....	\$ 260 00
April 20,	To cash paid amount warrant 184, favor Bills & Woodward,.....	2,081 50
" "	To cash paid amount warrant 135, favor Fenlon & Lonergan,.....	4,804 20

April	20,	To cash paid amount warrant 133, favor Co-ey's & Adams,.....	\$1,302 91
"	"	To cash paid amount warrant 132, favor J. K. & J. B. Moorhead,.....	2,686 00
"	"	To cash paid amount warrant 139, favor W. Milnor Roberts,.....	500 00
"	"	To cash paid amount warrant 136, favor G. W. Cass,.....	250 00
"	"	To cash paid amount warrant 137, favor J. H. Harper,.....	125 00
"	"	To cash paid amount warrant 138, favor James Galbraith,.....	15 00
May	7,	To cash paid amount warrant 140, favor J. K. & J. B. Moorhead,.....	1,560 00
"	"	To cash paid amount warrant 141, favor Coreys & Adams,.....	1,500 00
"	"	To cash paid amount warrant 142, favor Bills & Woodward,.....	3,000 00
"	"	To cash paid amount warrant 143, favor Fenlon & Loneragan,.....	2,500 00
"	"	To cash paid amount warrant 144, favor Nathan Harris,.....	950 00
"	"	To cash paid amount warrant 145, favor George Gossin,.....	200 00
"	"	To cash paid amount warrant 146, favor N. M'Dowell,.....	2 0 00
June	7,	To cash paid amount warrant 148, favor J. K. and J. B. Moorhead,.....	3,730 48
"	"	To cash paid amount warrant 149, favor Coreys & Adams,.....	2,866 17
"	"	To cash paid amount warrant 150, favor Bills & Woodward,.....	1,078 30
"	"	To cash paid amount warrant 151, favor G. W. Cass,.....	832 00
"	"	To cash paid amount warrant 152, favor Jacob Guyser,.....	20 00
"	30,	To cash paid amount warrant 154, favor Fenlon & Loneragan,.....	6,000 30
July	8,	To cash paid amount warrant 147, favor Thomas Bakewell,.....	56 50
"	"	To cash paid amount warrant 155, favor J. K. & J. B. Moorhead,.....	1,833 03
"	"	To cash paid amount warrant 156, favor Coreys & Adams,.....	3,570 43
"	"	To cash paid amount warrant 157, favor Bills & Woodward,.....	2,716 60
"	"	To cash paid amount warrant 158, favor Nathan Harris,.....	1,256 75
Aug.	13,	To cash paid amount warrant 159, favor W. B. Read,.....	50 00
"	"	To cash paid amount warrant 160, favor W. M. Roberts,.....	300 00

Sept.	8,	To cash paid amount warrant 161, favor Solomon Cooper, .....	\$ 100 00
"	"	To cash paid amount warrant 169, favor H. N. Frazier, .....	110 78
"	"	To cash paid amount warrant 162, favor Jacob Guyser, .....	34 00
"	13,	To cash paid amount warrant 168, favor Nathan Harris, .....	933 67
"	"	To cash paid amount warrant 166, favor Bollman & Garrison, .....	1,607 25
"	"	To cash paid amount warrant 170, favor Wm Hartupee, .....	136 86
"	"	To cash paid amount warrant 163, favor J. K. & J. B. Moorhead, .....	3,265 28
"	"	To cash paid amount warrant 164, favor Coreys & Adams, .....	2,510 60
"	"	To cash paid amount warrant 165, favor Bills & Woodward, .....	8,896 40
"	"	To cash paid amount warrant 171, favor James Galbraith .....	15 00
"	"	To cash paid amount warrant 167, favor Solomon Cooper, .....	213 17
"	22,	To cash paid amount warrant 172, favor Wm Hartupee, .....	146 25
"	27,	To cash paid amount warrant 173, favor N. Harris, .....	391 25
Oct.	5,	To cash paid amount warrant 174, favor John Harper, .....	125 00
Nov.	6,	To cash paid amount warrant 175, favor J. K. & J. B. Moorhead, .....	3,909 15
"	"	To cash paid amount warrant 176, favor Coreys & Adams, .....	4,306 07
"	"	To cash paid amount warrant 177, favor Bills & Woodward, .....	4,512 65
Dec.	16,	To cash paid amount warrant 181, favor James Galbraith, .....	30 00
"	"	To cash paid amount warrant 180, favor W. M. Roberts, .....	300 00
"	"	To cash paid amount warrant 179, favor N. M'Dowell, .....	240 00
"	"	To cash paid amount warrant 178, favor J. K. & J. B. Moorhead, .....	748 00
"	"	To cash paid amount warrant 182, favor John Capehart, .....	100 00
"	20,	To cash paid amount warrant 183, favor John Capehart, .....	100 00
"	"	To cash paid amount warrant 190, favor S. Cooper, .....	50 00
"	"	To cash paid amount warrant 189, favor Bills & Woodward, .....	2,200 00
"	"	To cash paid amount warrant 186, favor Coreys & Adams, .....	381 86

Dec.	20,	To cash paid amount warrant 183, favor Thos. Liggett, Sec'y, .....	\$ 200 00
"	"	To cash paid amount warrant 187, favor John D. Davis, Treas'r, .....	500 00
"	"	To cash paid amount warrant 185, favor J. K. & J. B. Moorhead, .....	87 45
"	"	To cash paid amount warrant 184, favor Incidental Expenses, .....	1,181 85
"	"	To Office Bank United States. For this amount balance of deposit U. S. Bank Notes, .....	287 69
"	27,	To cash paid amount warrant 191, favor G. H. Bowman, .....	515 50
"	"	To loss sustained on sale of \$21,600 State Stock, .....	4,548 06
"	"	To balance of State Stock on hand, .....	19,400 00
"	"	To balance of Cash on hand, .....	118 00
			<hr/>
			\$101,885 04

## C R E D I T S.

Dec.	31,	By balance 31st December, 1840, .....	\$ 500 29
"	"	By cash received of Bank U. States, .....	5,000 00
"	"	By cash received of Commonwealth of Pennsylvania, 1st, .....	7,500 00
"	"	By cash received of Commonwealth of Pennsylvania 2d, .....	30,000 00
"	"	By cash received of Bank of Brownsville	500 00
"	"	By cash received of Individuals, .....	16,077 93
"	"	By cash received for Tolls, Lock No. 1,	457 14
"	"	By cash received for Tolls, Lock No. 2,	849 68
"	"	By State Stock received of Common- wealth of Pennsylvania, for balance due on 2d Subscription, .....	40,000 00
"	"	By temporary loan of J. G. Davis, .....	1,000 00
			<hr/>
			\$101,885 04
"	"	By balance in Treasury, of which \$50 is unavailable, .....	118 00

JOHN D. DAVIS,

PITTSBURGH, Dec 31st, 1841.

Treasurer M. N. Co.



STATEMENT OF EXPENDITURES MADE BY THE  
**MONONGAHELA NAVIGATION COMPANY**  
 UP TO DECEMBER 31ST, 1841.

DESCRIPTION OF EXPENDITURES.	Am't expended up to Dec 31st, 1840.	EXPENDITURES IN 1841.			Total Amount expended.
		Construction.	Engineering.	Miscellaneous.	
Compensation of President,.....	1,526 68	.....	.....	.....	1,526 68
“ Secretary,.....	550 00	.....	.....	.....	750 00
“ Treasurer,.....	1,300 00	.....	.....	.....	1,800 00
Office Rent, Fuel and Attendant,.....	680 00	.....	.....	.....	990 00
Printing, Stationery, &c,.....	866 28	.....	.....	.....	416 82
Compensation of Engineers .....	9 609 72	.....	2,382 00	.....	11,991 72
Other expenses Engineer's Department.....	1,133 06	.....	.....	.....	1,133 06
Lock and Dam A, or No. 1,.....	43,203 44	17 620 94	.....	.....	60 824 38
“ “ B, “ 2,.....	42,675 85	16,532 03	.....	.....	59,213 88
“ “ C, “ 3,.....	5,795 80	19 435 46	.....	.....	25,230 75
“ “ D, “ 4,.....	8,358 99	13,867 37	.....	.....	22,226 35
Iron Work for Constructions,.....	5,890 65	2,604 50	.....	.....	8,495 15
Water Lime for “.....	6,720 50	3,991 69	.....	.....	10,712 19
Contingencies,.....	557 99	.....	.....	.....	1,073 37
Copies of Drawings Monongahela River.....	134 25	.....	.....	.....	134 25
Compensation of G. H. Bowman,.....	.....	.....	.....	.....	515 40
Loss on sale of \$21,600 State Stock,.....	.....	.....	.....	.....	4,548 06
<b>TOTAL,.....</b>	<b>\$128,502 71</b>	<b>\$ 4,057 98</b>	<b>\$2,382 00</b>	<b>\$6,639 88</b>	<b>\$211,582 07</b>



**S T A T E M E N T O F**  
**AMOUNT OF TOLLS RECEIVED & EXPENSES INCURRED AT LOCKS Nos. 1 & 2,**  
**FROM OCTOBER 25TH TO DECEMBER 19TH, 1841.**

**TIME OF RECEIVING.**

	LOCK No. 1.			LOCK No. 2.		
	Total Am't received.	Amount of expenses.	Net Profits.	Total Amount received.	Amount of expenses.	Net Profits.
Week ending 31st. October,.....	80 75	.....	80 75	209 62	50 00	159 62
“ “ 7th November,.....	79 00	A 66 93	12 07	97 50	20 00	77 50
“ “ 14th “.....	126 00	B 63 81	62 69	47 50	22 00	25 50
“ “ 21st “.....	77 50	45 65	31 85	59 25	22 00	37 25
“ “ 28th “.....	175 50	44 52	130 98	248 81	26 00	222 81
“ “ 5th December,.....	87 50	45 25	42 25	71 00	24 00	47 00
“ “ 12th “.....	118 50	46 82	71 68	314 50	106 50	208 00
“ “ 19th “.....	66 00	41 13	24 87	111 50	39 50	72 00
<b>TOTAL,.....</b>	<b>\$810 75</b>	<b>\$853 61</b>	<b>\$457 14</b>	<b>\$1159 63</b>	<b>\$310 00</b>	<b>\$849 63</b>

A This item includes two weeks' expenses.

B This item includes H. M'Carty's salary to that date.

C This item includes Moses Corey's salary to that date.

*Pittsburgh, December 31st, 1841.*

*JOHN D. DAVIS, Treasurer.*

FIFTH  
ANNUAL REPORT,  
OF THE  
PRESIDENT AND MANAGERS  
TO THE  
MONONGAHELA NAVIGATION  
COMPANY;

**Presented January, 1845.**

WITH THE  
ACCOMPANYING DOCUMENTS.

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PITTSBURGH:  
PRINTED BY JOHNSTON & STOCKTON,—37 MARKET STREET.  
1845.

## OFFICERS.

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**PRESIDENT—S. R. JOHNSTON.**

**TREASURER—THOS. M. HOWE.**

### **MANAGERS.**

<b>JOHN ANDERSON,</b>	<b>J. W. BURBRIDGE,</b>
<b>G. W. CASS,</b>	<b>W. F. COPELAN,</b>
<b>JOHN L. DAWSON,</b>	<b>J. F. KELLY,</b>
<b>JOHN T. LOGAN,</b>	<b>JOHN SHIPTON,</b>
<b>R. C. TOWNSEND,</b>	<b>EDWARD HUGHES.</b>

**SECRETARY—W. BAKEWELL.**

TO THE STOCKHOLDERS

OF THE

MONONGAHELA NAVIGATION COMPANY.

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CIRCUMSTANCES of a character that could not be controlled, had placed the Monongahela Slack-water Improvement in such a condition as made it unnecessary to publish a Report of the proceedings of the Board, and the condition of the work, since that submitted to you in January 1842. Owing to causes known to all of you, the whole work became greatly impaired, and the prospect of procuring the means necessary for the prosecution of the work were so gloomy, that fears were entertained it would have to be wholly abandoned, after more than one half of the work was done. Your resources were not only expended, but you were heavily in debt—not owing to a want of foresight or prudence on your part, but to the depreciation of the State bonds, paid on account of its subscription,—say 50 per cent. on \$100,000, making a loss on that item of \$50,000—and to the failure of the U. S. Bank of Pennsylvania to pay its second installment of \$50,000, making together \$100,000; a sum sufficient, if properly expended, to have completed the work to Brownsville.

The embarrassments of the Company, and the pressing demands of its creditors, made it necessary to apply the tolls received to the relief of the latter, with a faint hope that funds could be obtained by loan or otherwise to enable

the Company to prosecute the work to completion. In this hope, however, they were disappointed; and for want of the means to keep the work in proper repair, a breach took place in the south end of Dam No. 1, in July 1843, which at once cut off more than one half of the receipts of toll, prostrated the credit of the Company, and even created strong doubts of the wisdom and practicability of the undertaking, so that it appeared impossible to do any thing for its resuscitation. Thus the project lingered in this condition, a source of extreme mortification to its friends and projectors, and a nuisance to the navigation, until the fall of 1843, about which time the State stocks in various public works were to be sold; when a company of business men, believing they would sell much below their value, agreed to buy the stock of the Monongahela Improvement, and then put in a bid to finish the slack-water to Brownsville. All this has been done; and the stockholders may congratulate themselves on having this work at length completed, and from present indications, may look forward to the stock rising from three dollars a share to its par value, viz: fifty dollars.

The speedy completion of this work from its undertaking by the present contractors, shews what can be done, with the aid of ample funds, and the skill and perseverance of competent Engineers, Superintendents and workmen.

It was the month of March last before any thing could be done towards collecting materials for the construction of the locks and dams; and owing to a constant succession of freshets, nothing could be done in laying down the materials until about the beginning of July. It was in the brief period of four months that the locks and dams were built from the foundation, and the formidable breach in Dam No. 1, which had washed to the depth of thirty-nine feet below low-water mark, was closed.

As it was the general opinion that the navigation could not be opened until the latter part of next summer, little attention was paid to forming lines of steam boats and

stages for carrying passengers to Cumberland, and, consequently, is yet incomplete; but arrangements are now being made for putting on the river at least two new fast and commodious steamers, to make the trip to Brownsville and back in the same day, in connection with a sufficient number of splendid stage coaches to carry all passengers between Brownsville and Cumberland. Several boats for carrying freight and way-passengers are already in the trade, and passengers are now carried by this route through to Baltimore for ten dollars, and to Philadelphia for twelve dollars. With the opening of the spring business, the arrangements for carrying passengers on this route will be such, that the trip to Baltimore will be made in 30 hours.

As the character of this route across the mountains is not generally known to the public, this may be the proper place to speak of it. From Pittsburgh to Brownsville by steam boat on the slack-water is 55 miles—from Brownsville to Cumberland, by stage-coaches over the National Turnpike, 73 miles—thence to Baltimore by the cars of the Baltimore and Ohio Rail Road Company; affording, altogether, facilities for travelling, unsurpassed in this country, for speed, comfort and safety. Nor is this all the benefits the public will derive from this valuable improvement—it has opened a steady navigation into the heart of a country abounding in valuable minerals, agricultural products, and extensive manufactories of iron, glass, paper, &c. &c., besides inexhaustible beds of the best bituminous coal, from which the cities between here and New Orleans are supplied.

In the construction of this work, the company of contractors have shewn their wisdom and knowledge in pushing the work to speedy completion by employing suitable persons to carry out their plans. In the selection of their Engineer, they could not have had a more judicious choice made for them than that of the Board of Managers, in the appointment of Sylvanus Lothrop, Esq. This gentleman combines in an eminent degree the qualifications of a skillful Engineer and a perfect knowledge of wood and

stone work, so essential to the permanency of such an improvement. Much credit is also due to the industry and perseverance of J. B. Moorhead, Esq., appointed by the Board of Contractors as the Superintendent for the whole line; and it may be said, without fear of contradiction, that to the systematic arrangements, and untiring efforts of these gentlemen, the public is mainly indebted for the opening of the navigation to Brownsville at the time it was.

Several important and valuable improvements have been made to the work beyond the original plans. One of which is the adoption of a new plan of suspending and working the lock gates. By the introduction of this improvement a boat can be passed through a lock in five minutes, causing a delay of not more than half an hour at farthest, in the aggregate, of going through the four locks. The economy, also, attending this improvement, is another of its advantages, as there is a saving of one-half the number of hands employed in working the gates upon the old plan. It need but be seen to insure its adoption in all large lock gates.

The Engineer has, with his usual sound judgment, introduced wicket gates, differing materially from those heretofore in use, which work much easier and more effectively, and greatly facilitate the passage of boats, &c. He has also made alterations in the shape of the dams, by giving them a slight curvature up stream, and thereby adding to their strength, as the water has an arch to press against instead of a straight line, which has the tendency to throw the water passing over the dams towards the middle of the river instead of towards the shores, and to cause less action on the banks immediately below.

With this report will be submitted to you the several reports of the Engineer and Treasurer, to which you are respectfully referred for the information therein contained.

As it may be gratifying also to know the amount of tolls received from the Slack-water between the time of its completion, Nov. 11th, and Dec. 31st, 1844, an abstract from the Collectors' books is herewith furnished.

## TABLE OF TOLLS.

Week ending	Lock No. 1.	Lock No. 2.	Lock No. 3.	Lock No. 4.	Totalea. week.
Nov. 16,	234 70	141 16	64 16	154 14	594 16
" 23,	347 77	43 84	25 74	158 02	575 37
" 30,	377 83	114 21	51 24	180 11	723 39
Dec. 7,	331 70	132 26	39 20	182 93	686 09
" 14,	266 94	50 10	21 07	67 36	405 47
" 21,	174 92	26 67	1 12	43 50	246 21
" 28,	116 39	20 42	15 62	35 38	187 81
" 29 to 31,	82 99	40 70	14 35	56 48	194 52
	\$1.933 24	\$569 36	\$232 50	\$877 92	\$3.613 02

Freight received at Pittsburgh from the 11th November to the 31st December, 1844:

Classed freight,	-	pounds,	-	-	-	1,499,173
Window Glass,	-	boxes,	-	-	-	9,229½
Apples,	-	barrels,	-	-	-	3,953
Flour,	-	"	-	-	-	1,614
Whiskey,	-	"	-	-	-	622
Coal,	-	bushels,	-	-	-	737,150

Freight shipped at Pittsburgh during the above time:

Classed freight,	-	pounds,	-	-	-	1,776,454
Boards,	-	feet,	-	-	-	67,662
Shingles,	-	count,	-	-	-	18,600
Brick,	-	"	-	-	-	1,600
Whiskey,	-	barrels,	-	-	-	49
Salt,	-	"	-	-	-	1,367

In addition to the above, there have been 1454 through passengers over the improvement, 1068 way-passengers, various distances, 216 clearances, issued at Nos. 1 and 4, (principally steam boats,) and 710 coal flats passed No. 1, in addition to the amount above stated.

Respectfully submitted,

S. R. JOHNSTON,  
*President.*

JANUARY 6, 1845.





# REPORT

OF

## SYLVANUS LOTHROP, ESQ.

**Dated 30th December, 1844.**

*To the President and Managers of the Monongahela Navigation Company:*

GENTLEMEN,—I have the honor to submit for your consideration my first Annual Report, as Engineer of the Monongahela Navigation Company.

I was first employed by the Company in August, 1843, with instructions to superintend the closing of the breach in dam No. 1. Owing to the difficulty of procuring large quantities of stone and other materials, not much progress had been made in the undertaking, when, on the 11th September, the works intended to repair the breach were swept away by a sudden freshet. This flood also suspended the operations of George R. Eichbaum, Esq., at dam No. 2; and as the high water continued for some time, and the season was far advanced, both these dams were necessarily left in an exposed situation.

At this period the prospects of the Company were exceedingly gloomy. Both of the dams were considered to be in too dilapidated a condition to stand the winter and spring floods. Lock No. 1, rendered nearly unproductive by the breach in the dam, and the finances of the Company in a condition of hopeless embarrassment, it seemed as if the expectations of the projectors and friends of the enterprise were doomed to be sadly disappointed.

Under these circumstances, a company of gentlemen, duly appreciating the importance and value of this great work, associated themselves together under the name of Moorhead, Robertson & Co., and proposed to complete the line of slack-water navigation from Pittsburgh to Brownsville.

On the 9th of November, 1843, Messrs. Moorhead, Robertson & Co., entered into a contract with the Monongahela Navigation Company to do the following work, viz: To close the breach in dam No. 1; to raise the walls of locks Nos. 1 and 2, each five feet; to build locks and dams Nos. 3 and 4; and to build four lock houses. At the same time I was appointed Engineer of the work, and entered into the service of the Company in that capacity.

On the 23d December, 1843, the whole work was allotted by Messrs. Moorhead, Robertson & Co., in suitable portions, to practical mechanics and competent and skillful contractors; who immediately commenced making preparations, with the hope of entering upon the construction of the work early in the spring. Owing to the high water, however, very little could be done before July; but through the energy and perseverance of the contractors, who were favored with a few weeks only of low water, a line of slack-water navigation from Brownsville to Pittsburgh,—which it is believed will compare favorably with any other in the country,—was opened for navigation on the 3d of November; and ten days thereafter, on the 13th November, 1844, the opening of this line of communication was duly celebrated, with appropriate ceremonies.

The completion of so important an undertaking, in the short time allotted to this work, has required the united efforts of all the parties interested; and I am happy to say that they have been fully given, in an interchange of honorable dealing between the parties. It was all-important that the work should be finished before the fall freshets; and the contractors, aware of the consequences which might attend an unfinished dam during the winter and spring

floods, pushed forward their work with an energy seldom witnessed in like undertakings. All estimates and payments have been fully met and discharged, and every facility and assistance have been rendered to the contractors by the Superintendent, whose experience, energy and decision have contributed largely to the completion of this work.

The navigation has continued in regular use since its opening, (with the exception of one or two days when it was obstructed by ice,) and has in every respect answered my most sanguine expectations; every part fulfilling the full end and purpose for which it was intended.

By means of simple machinery, the large lock gates are easily managed, and boats are passed with a facility and despatch not heretofore accomplished in the management of locks of similar size. The Company's works, forming the slack-water navigation, consist of four locks and dams. Dam No. 1 backs the water 7 feet 3 inches, and dams Nos. 2, 3 and 4, back the water 8 feet each; making in all an ascent of 31 feet 3 inches from Pittsburgh to Brownsville, and the four pools form a slack-water navigation of  $54\frac{1}{2}$  miles.

The locks are 50 feet wide in the chamber, and 190 feet long between the gates. The walls are 252 feet 6 inches long, 24 feet 9 inches high, and 10 and 12 feet broad at the foundation. Each lock contains 5300 perches of stone masonry. The lower mitre sills are placed five feet below the level of the pools, and the breast walls are six feet below the crown of the dam with which they are connected. The levels appear correct, and give the same depth of water on each of the mitre sills above No. 1.

The work of construction on this navigation was suspended for two years, and during that time there were no reports made. The last Annual Report of W. Milnor Roberts, Esq., (the former Engineer of the Company,) is dated 18th December, 1841, setting forth the cost of the work then done, as follows, viz:

Lock and dam No. 1, - - - -	\$71,557 50
Lock and dam No. 2, - - - -	69,645 50
Lock and dam No. 3, - - - -	30,451 12
Lock and dam No. 4, - - - -	22,880 60
Cement, - - - -	10,712 19
Iron work, - - - -	8,431 15
	<hr/>
	\$213,678 06

Amount expended in 1844:

Protection of bank in Birmingham,	\$2,096 91	
Closing breach in dam No. 1, -	10,000 00	
Repairs of lock and dam No. 1, -	5,926 30	
Raising lock wall No. 1, - -	605 60	
Lock house No. 1, - - -	900 00	
Raising lock wall No. 2, - -	5,890 00	
Repairs of lock and dam No. 2, -	9,597 11	
Building locks & dams Nos. 3 & 4,	169,517 30	204,533 22
		<hr/>
Total,		\$418,211 28

Estimated amount of work to be done:

Lock house No. 1, - - -	350 00	
Raising walls of lock No. 1, -	6,894 40	
Building offices at locks 2, 3 and 4,	750 00	
Raising walls of lock No. 2, - -	1,610 00	
New gates at lock No. 2, - -	1,750 00	
Gravel and protection at dam No. 3,	2,850 00	
Do. do. do. No. 4,	1,650 00	15,854 40
		<hr/>
		\$434,065 68

The above does not include the cost of Engineering, salaries, and incidental expenses, which will be shown in the report of the Treasurer.

TABULAR STATEMENT OF DISTANCES.

No. of Locks and Dams.	Distance from Pittsburgh.	Length of Pools.
No. 1, near Pittsburgh,	- - 1 mile. - -	10 miles.
" 2, Braddock's Ripple,	- 11 do. - -	14 do.
" 3, Watson's Run,	- - 25 do. - -	15 do.
" 4, Fry's Shoals,	- - 40 do. - -	15½ do.
Brownsville,	- - 55½ do.	

At the time of letting the work, Messrs. Moorhead, Robertson & Co. invited proposals for building four lock houses; the work was allotted to J. & A. Patterson, of Allegheny, but for want of lots only one house has been built. Should lots be purchased hereafter, it would be desirable to secure the shore the full length of the locks; the works are of too much importance to be deprived of all right to the bank with which they are connected.

*Dam No. 1.*

The closing of the breach in this dam proved to be a work of much greater magnitude than was at first anticipated. The breach was carefully measured in April, 1844, and the greatest depth of water was twenty feet; but owing to high water during the summer, it was found to be near forty feet in September. This added largely to the amount of stone and timber required, and made it difficult and expensive to secure the cribs and accomplish the work. We had no low water until late in the season, and the company became apprehensive the breach would not be repaired; therefore, as soon as the water would permit, the work was pushed forward with great rapidity, and could not be done with as much care as was desirable. The work is, however, abundantly safe. It possesses an immense mass of timber and stone that no power can remove, but was not constructed in that workman-like manner I would have desired.

The remaining part of this dam has been faithfully overhauled and repaired. The upper slope has been gravelled, a large share of the lower sheathing has been lifted, new timber put in and secured with bolts and spikes, the cribs all filled with stone, and the sheathing put on and secured in a proper manner; the dam is now in good order, and no fears need be entertained of another breach.

*Lock No. 1.*

This lock is of good substantial construction, in good repair and fine working order. The gates were suspended under the superintendence of H. McCarthy. The rail-

ways, rollers, sheaves, chains and crabs have all been dispensed with, and the gates are now worked by capstans on the top of the walls.

By contract, Messrs. Moorhead, Robertson & Co. are to add to the height of the walls of this lock five feet, during the coming season. This work might be delayed until the present gates are worn out. The lock is  $2\frac{1}{2}$  feet higher than No. 2, and it is very seldom submerged, unless by back-water from the Allegheny, and in that case all boats will pass over the dam. A part of the abutment wall of this lock has been raised, in pursuance of the contract. This became necessary, in order to make a foundation for the lock house, and a permanent brick dwelling and office have been erected during the past season.

Your attention has heretofore been called to the ground between lock No. 1 and the shore, as a site for a Dry-dock. It presents every facility for that purpose, and its construction would accommodate the steam boat interest, and yield a fine revenue on the investment.

#### *Lock No. 2.*

During the summer the mitre gates of this lock were found to be in a failing condition, and unsafe for another year's business. This induced Messrs. Moorhead, Robertson & Co. to raise the lock walls, and make the new gates to the increased height.

The new stone masonry has all been laid, so far as can be done before taking out the old gates. The new gates, irons, &c. are all prepared, ready for raising, and will be put in during the month of January.

The sluice gates of this lock became loose and were taken out in 1843. The lock bottom was very leaky, and during the low water of the past season an effort was made, and (with some difficulty) the workmen succeeded in stopping several holes in the lock floor; also, in filling up the recess (formed for the sluice gates) with gravel, and covering the

same with two courses of plank. This has improved the lock, and the floor is now believed to be in good order.

*Dam No. 2.*

In consequence of a failure to make some important repairs in the fall of 1843, this dam was left in a dilapidated condition, and some fears were entertained for its safety during the spring floods; it stood, however, far better than I expected. It has since been repaired, and is now permanent and safe.

A guard bank has been raised above the highest water-mark from the abutment, to meet the high ground—a protection of stone and brush has been placed near the abutment, to prevent further washing of the bank, and the upper slope has been replenished with gravel. Two thousand feet of timber have been laid in the cribs of the dam, and 3000 perches of stone used in filling the cribs, the lower sheathing put on, and every thing finished and secured in a manner which does credit to the superintendent of repairs.

*Lock No. 3,*

Is one of the new locks, located at Watson's run, 25 miles from Pittsburgh, and built during the past season under the immediate superintendence of the contractors, Messrs. ALSTON and HANNAY.

The stone was quarried at West Elizabeth, cut and prepared on the bank, and from thence boated to the lock, and lifted and set with cranes. This work has been executed with mechanical skill, and in a faithful, workman-like manner.

The large lock gates are of good materials, well executed, possessing great strength, and fulfilling in every respect the end and purpose for which they were designed.

The recess in the floor (designed for sluice gates) has been filled with puddle, and covered with two courses of plank. Every part of this lock is well finished, and in good working order.



*Dam No. 3,*

Constructed during the past summer, by JOHN LINDSAY, contractor. Its form is three straight lines, forming two angles. The central part is 280 feet long, and on a line 22 feet farther up stream than the ends. The design of this form is to concentrate the water below the dam, and to prevent the washing of the banks.

This dam is 700 feet long, and 65 feet wide, constructed of timber cribs, filled with stone, and contains 60,000 cubic feet of timber, and near 17,000 cubic yards of stone filling. The abutment, crib, piers, &c., are of the usual form, with an embankment between the lock and shore, secured by a crib at the lower end.

*Lock and Dam No. 4.*

This lock and dam is located at Fry's Shoals, 40 miles from Pittsburgh, and is the upper dam on the line, backing the water to Brownsville.

This work was constructed during the past season by Messrs. LOCKART and THOMAS, contractors for both lock and dam. The form of the dam is the segment of a circle, with a versed sine of 15 feet, its convex up the stream, and is 603 feet long and 65 feet wide. The new dams were required to have five feet of plumb crib work at the lower eaves; and where there was not a sufficient depth of water, the bed of the river was excavated to that depth, which was the case at this dam.

The lock is a fine specimen of stone masonry, and will not suffer by comparison with any work of the kind. Every part is finished and in complete business operation, passing boats in the short time of five minutes.

Every part of this work has been well executed, and is finished in that workman-like manner that shows the skilful hand of the Contractors, and attracts the attention and admiration of the traveler.

At the time Messrs. Moorhead, Robertson & Co. entered into their contract, it was considered necessary to increase

the base of dams Nos. 1 and 2, by putting further crib work at the lower eaves, and timber was prepared for that purpose; but after a careful examination, during low water, it was decided to be unnecessary at present; therefore a quantity of timber is left on hand, which has been estimated to Moorhead, Robertson & Co., and is now the property of the Company, as follows, viz:

Timber at dam No. 1,	-	-	-	-	9,340 feet.
Do. do. do. 2,	-	-	-	-	12,067 "
Do. do. do. 3,	-	-	-	-	9,700 "
Do. do. do. 4,	-	-	-	-	4,492 "
Total,					35,599

The Company will also have on hand, the lock irons to be taken from the old gates at lock No. 2; also, the articles which have been dispensed with by suspending the gates at lock No. 1.

Respectfully submitted,

SYLVANUS LOTHROP,

*Engineer.*

PITTSBURGH, 30th DECEMBER, 1844.

## REPORT OF COMMITTEE

TO WHOM THE TREASURER'S ACCOUNTS WERE REFERRED.

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PITTSBURGH, 31st. December, 1844.

The Committee appointed to audit the Treasurer and Contractors' accounts, beg leave to report: That they have given the duties assigned to them the necessary attention, and have found the statements of the Contractors, (Messrs. Moorhead, Robertson & Co.) and of T. M. Howe, Esq., Treasurer, to be correct.

The Committee have examined the items, comprised in the Contractors' statement under the heads of Expenses, Tolls, and Warrants. Satisfactory evidence and vouchers were produced for the payment of the various sums charged to Expenses and Warrants, and the weekly returns of the lock keepers were referred to and compared with the total amount credited to Tolls.

The balance of \$4,708 78, as shown by the said statement, was the amount due the Company, by the Contractors, on the 31st inst.

JOHN F. KELLY,  
JOHN T. LOGAN.

TREASURER'S ACCOUNT

WITH THE

MONONGAHELA NAVIGATION COMPANY.

THOMAS M. HOWE, TREASURER,

*In account with Monongahela Nav. Co.*

1844.

**DR.**

May 29,	Received of Jas. Veech, Esq., att'y, on acc't of collections, - - -	\$410 00
June 25,	Rec'd of Jno. D. Davis, late Treas- urer, being for collections by Jas. Veech, Esq., remitted to him, - -	218 98
		<u>\$628 98</u>

CREDIT.

July 15,	By am't paid administrator of N. M'Dowell, dec'd, being the balance due on warrant No. 254, - - -	\$629 33
	Due Treasurer, - - -	35

THOS. M. HOWE,  
*Treasurer.*

## TREASURER'S ACCOUNT

WITH

MOORHEAD, ROBERTSON &amp; CO.

## THE MONONGAHELA NAVIGATION CO.

*In acc't with Moorhead, Robertson & Co.*

A.	DE.
Jan'y 30	Protecting bank at Birmingham, as
to Feb. 24,	per estimate of Engineer, - \$2,096 91
April 2	Work at lock and dam No. 1, per
Dec. 26,	estimate Engineer, - - 16,531 90
April 2	Work at lock and dam No. 2, per
Dec. 26,	estimate Engineer, - - 15,487 11
April 2	Work at lock and dam No. 3, per
to Dec. 26,	estimate Engineer, - - 84,341 40
April 2	Work at lock and dam No. 4, per
to Dec. 26,	estimate Engineer, - - - 85,175 90
Dec. 2,	Lock house, per estimate, - 900 00
" 31,	Am't paid on warrants from the 9th
	Nov. 1843, to this date, - - 3,056 36
" 31,	Am't paid Bank Pittsburgh, inter-
	est on loan, - - - - 309 35
" 31,	Miscellaneous expenses from Nov.
	9th, 1843, to this date, as per
	vouchers, - - - 3,365 09
" 31,	Balance due the Mon. Nav. Co. - 4,708 78
	\$215,972 80

1844.		CR.
Feb. 23,	By bonds payable 1st Oct. 1854,	- 2,000 00
April 1,	" do. " " " "	- 11,500 00
May 1,	" do. " " " "	- 16,000 00
June 1,	" do. " " " "	- 24,000 00
July 1,	" do. " " " "	- 18,500 00
Aug. 1,	" do. " " " "	- 26,500 00
Sept. 2,	" do. " " " "	- 28,500 00
Oct. 1,	" do. " " " "	- 18,000 00
Nov. 1,	" do. " " " "	- 25,000 00
Dec. 2,	" do. " " " "	- 12,000 00
" 26,	" do. " " " "	- 22,500 00
" 28,	By tolls collected from the 12th Nov. 1843, to date, viz:	
At Lock No. 1,	- - - -	6,243 85
" Lock No. 2,	- - - -	4,075 27
" Lock No. 3,	- - - -	332 24
" Lock No. 4,	- - - -	821 44—11,472 80
		<hr/> \$215,972 80
Dec. 31,	By balance, - - - -	\$4,708 78

ATTEST, THOS. M. HOWE, *Treasurer of*  
MOORHEAD, ROBERTSON & Co.

PITTSBURGH, *January 6, 1845.*

At a meeting of the Stockholders of the Monongahela Navigation Company, the following gentlemen were elected Officers and Managers for the year 1845:

PRESIDENT—JOHN B. BUTLER.

TREASURER—THOS. M. HOWE.

MANAGERS.

JOHN ANDERSON,  
J. W. BURBRIDGE,  
G. W. CASS,  
W. F. COPELAN,  
N. B. CRAIG,

JOHN L. DAWSON,  
S. R. JOHNSTON,  
J. F. KELLY,  
JOHN T. LOGAN,  
R. C. TOWNSEND,

SECRETARY—WM. BAKEWELL.

## ACTS OF ASSEMBLY.

AN ACT to provide for continuing the Improvements of the State, and for the payment of the interest on the public debt.

SEC. 5th. The Governor is hereby authorized and required, within thirty days after the passage of this Act, to subscribe to the stock of the Monongahela Navigation Company, the sum of one hundred thousand dollars, which shall constitute the Commonwealth a stockholder in said Company to that amount; *Provided*, That all descending crafts owned by citizens of Pennsylvania, not calculated or intended to return from any point between Millsborough and the Virginia State line, shall pass free of toll through any lock or dam of the lower division of said improvement, until the Company shall put the first dam above Brownsville, in the second division, under contract, and complete the same agreeably to the plan of said improvement.

Approved—the 11th day of June, A. D. 1840.

## RESOLUTION relative to the Monongahela Navigation Co.

Resolved, By the Senate and House of Representatives of the Commonwealth of Pennsylvania in General Assembly met, and it is hereby enacted by the authority of the same, That in case of a vacancy occurring in the office of President of the Monongahela Navigation Company, either by death, resignation, or otherwise, the Board of Managers shall have power to fill the vacancy by the election of any person who may be a stockholder in said company, and the person so elected shall hold and exercise all the powers, and receive all the emoluments appertaining to the office of



tainly all the best ones, are occupied. When he comes to pay his passage, he finds that he must pay the same as those who came from Pittsburgh. Perhaps, too, he may be bound for Louisville, Nashville or St. Louis, his boat may stop at Cincinnati, and a few hours after his arrival at the latter place, another boat may arrive from Pittsburgh, bound to his own destined port. He embarks on board that boat, and may again be subjected to some of the inconvenience which he was subjected to after leaving Wheeling."

"Travellers going eastward, if they take the stage at Wheeling, have to go one hundred and thirty-one miles, by stage, to reach Cumberland, and of course have to spend one night travelling. But if they proceed by Steamboat to Pittsburgh, they lose no rest. Upon their arrival at the latter place they can take either a morning or evening Steamboat for Brownsville, and thus, at their pleasure, pass the mountains either by day-light, or in the night."

Respectfully submitted,

JOHN B. BUTLER,

*President.*

JANUARY, 5, 1846.

SIXTH  
ANNUAL REPORT,  
OF THE  
PRESIDENT AND MANAGERS  
TO THE  
MONONGAHELA NAVIGATION  
COMPANY;

**Presented January, 1846,**

WITH THE  
ACCOMPANYING DOCUMENTS.

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PITTSBURGH:  
PRINTED BY JOHNSTON & STOCKTON, — 39 MARKET STREET.  
1846.

President, until the next annual election of officers for said Company. And it shall be lawful for the President and Managers of the Monongahela Navigation Company to raise by way of loan, at a rate of interest not exceeding six per cent., from any individual, bodies politic or corporate, on such terms and conditions as they may think fit, such sums of money as they may from time to time find expedient for the completion of said improvement, upon the credit of the capital stock and incorporation, including the nett proceeds of the tolls and profits of the same. And for the fulfillment of the terms and conditions of any such loan, to mortgage any part or the whole of their property, tolls, profits, or estates whatever; which mortgage or mortgages shall be transferable at any time hereafter on the books of the Company; Provided, That the contract for said loan or loans shall be approved by the Governor.

Approved—the 4th day of May, 1841.

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*AN ACT extending the time for the completion of the Lock Navigation on the River Monongahela, and for other purposes.*

SECTION 1. Be it enacted, &c. That the time fixed for the completion of the Lock Navigation on the Monongahela River, by the seventeenth section of the Act entitled "an Act to authorize the Governor to incorporate a Company to make a Lock Navigation on the river Monongahela," passed on the thirty-first day of March, eighteen hundred and thirty-six, be and the same is hereby extended, for another period of seven years, from the passage of this Act.

Approved—March 31, 1843.

SIXTH  
ANNUAL REPORT,  
OF THE  
PRESIDENT AND MANAGERS  
TO THE  
MONONGAHELA NAVIGATION  
COMPANY;  
**Presented January, 1846,**  
WITH THE  
ACCOMPANYING DOCUMENTS.

PITTSBURGH:  
PRINTED BY JOHNSTON & STOCKTON,—39 MARKET STREET.  
1846.

## OFFICERS.

PRESIDENT—JOHN B. BUTLER.

TREASURER—THOS. M. HOWE.

### MANAGERS.

JOHN ANDERSON,	JOHN L. DAWSON,
J. W. BURBRIDGE,	S. R. JOHNSTON,
G. W. CASS,	J. F. KELLY,
W. F. COPELAN,	JOHN T. LOGAN,
N. B. CRAIG,	R. C. TOWNSEND.

SECRETARY—WM. BAKEWELL.

TO THE STOCKHOLDERS  
OF THE  
**MONONGAHELA NAVIGATION COMPANY.**

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THE Monongahela Slack-water Improvement is completed; and has been in successful operation for one season.

It has fully realized the anticipations of its most sanguine and ardent friends, and has even during the brief period since its completion yielded great benefits to the public, and secured a notoriety and popularity which it has not been the fortune of other and similar works to attain for many years. This, doubtless, is owing to the fact, that it is held to be one of the best constructed, and, so far as scenery is concerned, one of the most beautiful works of inland navigation, that is to be found any where in the United States. The fact, also, that it continues the Steamboat navigation of the Ohio river, from Pittsburgh to Brownsville, (a distance of 55 miles,) has attracted at once much of the travel and trade, that were formerly diverted from the route at Wheeling, or which necessarily stopped at Pittsburgh.

There is now no interruption in the progress of passengers or freight, destined for any of the Atlantic cities. Large Packets, well constructed and handsomely equipped and furnished, run daily and regularly between Pittsburgh and Brownsville; giving to men of business prompt despatch and every facility for the transportation of goods and products, and to the travelling community every convenience and comfort that can be obtained on the best boats that run on the Ohio and Mississippi rivers.

For details of the manner and plan of the construction of the works on this Improvement, I respectfully refer to the

able and very satisfactory report of S. LOTHROP, Esq. the Engineer of the Company.

There is also appended an abstract from the report of Mr. WILLIAM M'ELROY, which gives a history of the trade and travel done upon this Improvement during the past season. Mr. M'Elroy, as Inspector of Cargoes and General Superintendent of Collections and Tolls, has been eminently successful in introducing a system, which while it facilitates the operations of business upon the works, at the same time prevents fraud and imposition, and has given great satisfaction to the owners and transporters of goods and to the Board of Directors who appointed him. It is but just that I should state, that Mr. M'Elroy has performed his delicate and arduous duties with ability and decision, and to the entire satisfaction of the Company and the Directors.

Considering the Monongahela Slack-water Improvement to be a work of general interest and of great public importance, and that the commercial and travelling community should be advised and satisfied of its importance, from impartial and disinterested men, I deem it proper to make extracts from a Report published by a company of gentlemen who took an excursion of examination on the first opening of this Improvement. It is not designed to re-publish all of their interesting Report, but merely to give such portions as will show the importance of the work.

The facts in the Report are important for public information; and as they have been collected and published by gentlemen of integrity and intelligence, and who are entirely disinterested, they will have influence and weight with the travelling community. Among the names appended to the Report in question, are, viz: N. B. Craig, Esq. Hon. R. C. Grier, Hon. J. C. Plummer, John Anderson, Esq. Hon. Jas. Bell, C. W. Smith, (N. O.) E. J. Martin, Louisville; Col. Robert Orr, Armstrong; B. B. Hart, Philadelphia; Henry Hall, Baltimore; J. L. Neff, Maryland; Lieut. John Rodgers, U. S. N.; C. H. Fuller, civil engineer; Lieut. J. L. Parker, U. S. N.; J. D. Davis, Wm. Eichbaum, Josiah King, &c.

In reference to the works, these gentlemen remark—

“The subscribers were especially pleased with the opportunity afforded them, of examining the substantial workmanship of the locks, and the admirable machinery by which the gates are worked, on the Monongahela Slack-water. They were both surprised and gratified to find that the very large locks could be filled, and the Steamboat passed through each of them, with a detention not exceeding SIX MINUTES!

They were thus fully convinced, that a durable Improvement has been made, which secures safe and rapid communication between Pittsburgh and Brownsville, at all seasons of the year, except when closed by ice.”

\* \* \* \* \*

“Our aim is to make known to our fellow citizens throughout the Union, who may have occasion to travel either eastward or west-ward, between the sea-board and the Mississippi valley, that a new avenue has just been opened which presents great advantages, on the score of economy, comfort and speed.”

“The excellent Railway, extending from Baltimore to Cumberland, brings travellers by that very speedy and pleasant mode of locomotion, within seventy-five miles of Brownsville, and within one hundred and thirty-one miles of Wheeling. The new Improvement has opened a Steamboat navigation, which will continue throughout the year, except when interrupted by ice, from Brownsville to Pittsburgh. When travellers or merchandise going West arrive at Brownsville, the question presents itself, whether the stage or wagon to Wheeling, or the Steamboat to Pittsburgh, shall be preferred. Again, when travellers or produce arrive at Wheeling, going eastward, the question arises, whether the Steamboat to Brownsville by Pittsburgh, or the stage or wagon to Brownsville, shall be preferred.”

\* \* \* \* \*

“When the traveller arrives at Brownsville, he is wearied by confinement all night in the stage, and is eager to take advantage of a Steamboat to continue his journey, instead of toiling on for twelve hours longer in the stage to Wheeling. With most men this will be a strong temptation, and will be still stronger, if he has females or children with him. But there are still further reasons for going to Pittsburgh. He arrives there after a pleasant voyage, through an interesting valley, without fatigue, and has time to select among several Steamboats, and to choose a berth. If he is bound for St. Louis, he may take a boat going to that place; if to Nashville, then a boat bound there, and thus avoid the trouble of changing from one boat to another. On the other hand, if he proceeds by stage to Wheeling, he must depend on a Steamboat from Pittsburgh; he is eager to get forward, a boat arrives, will detain but a short time, he has no time to examine or stipulate about his passage money, he hurries on board, the boat shoves off, and when he has a little leisure to look about, he finds that perhaps all the berths, cer-



tainly all the best ones, are occupied. When he comes to pay his passage, he finds that he must pay the same as those who came from Pittsburgh. Perhaps, too, he may be bound for Louisville, Nashville or St. Louis, his boat may stop at Cincinnati, and a few hours after his arrival at the latter place, another boat may arrive from Pittsburgh, bound to his own destined port. He embarks on board that boat, and may again be subjected to some of the inconvenience which he was subjected to after leaving Wheeling."

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Respectfully submitted,

JOHN B. BUTLER,

*President.*

JANUARY, 5, 1846.

# R E P O R T

O F

SYLVANUS LOTHROP, ESQ.

*To the President and Managers of the Monongahela Navigation Company:*

GENTLEMEN,—In presenting my second Annual Report, as Engineer of the Company, it affords me great satisfaction to be enabled to state, that since the last Annual Report, the Navigation has not been interrupted or delayed in a single instance, by the breaking or failure of any part of the works or fixtures connected with the improvement; but has continued in successful operation at all times, when free from ice, except on a single occasion, and that for one day only, when it was partially obstructed by a flood in the Monongahela, so high as to cover two of the locks, and to enable steamboats to pass over the dams. This, however, is a casualty that will very seldom occur, as floods of that height are unusual, and the walls of the locks being raised ten feet above the combs of the dams with which they are connected, it would require a rise of more than twenty feet, in the natural condition of the river, to submerge them. It may be proper, however, to remark in connection with this circumstance, that, so far as the public is concerned, a casualty of this sort, how frequently soever it might happen, would be attended with no inconvenience to them whatever, as the boats and other craft engaged in the navigation can always pass over the dams, whenever, and even before, the operation of the locks is suspended by high water. The principle has heretofore generally been admitted, and is now ascertained by actual experience and observation to be correct, that whenever the waters of the Monongahela swell to an elevation of eight feet upon the combs of the dams, they then cease to back the water, and the

flood is no higher in consequence of their erection. The fall being then distributed along the pools, and the surface nearly equalized, both above and below, they can be passed in either direction by steamboats of the largest class employed in the trade, without hazard or delay.

The Company's Works, forming the navigation, consist of four Dams, and as many Locks, overcoming a fall in the Monongahela River of 32 feet, and making a Slack Water Steamboat Navigation of  $54\frac{1}{2}$  miles, from Lock No. 1, near Pittsburgh, to Brownsville. The Locks are massive structures of cut stone masonry, laid in hydraulic cement, with chambers measuring 190 feet in length and 50 feet in width, corresponding, in size, with those on the Louisville and Portland Canal, at the Falls of the Ohio. The points of the heavy mitre gates are suspended from the top of the walls, and swing clear of the floor; the quoin posts are secured at their upper ends by wing journals and back stays, (in place of collar bands,) and the gates are opened and closed by means of capstans placed on the top of the walls. The dams vary in length from 605 to 1100 feet, averaging 825 feet each, with a base of 65 feet in width, and a height of from 13 to 16 feet, according to the depth of the water where they are located. They are constructed of timber laid in alternate courses, crossing each other at right angles, and forming open cribs of 7 by 9 feet each, spiked at all the crossings, and filled with stone. The upper slope is covered with a double course of white oak plank, 5 inches thick, and the lower with a single course of solid timber, of the same material, eight inches in thickness, with a double course of vertical sheet piling at the upper side, each of the said slopes having an elevation of one foot, perpendicular, to four feet base.

This important line of communication has now been in successful operation for more than a year, fulfilling in every respect the great purposes for which it was designed, by its public spirited projectors. The huge, and apparently unwieldy gates, which are necessarily required to confine and discharge the immense volume of water contained within a lock of such unusual capacity as those of the Monongahela Navigation, are worked by a mechanical contrivance of the simplest description, with an ease and celerity, which enables the largest steamboats to pass through them in the incredibly short space of five minutes, making the whole detention between Pittsburgh and Brownsville from that cause very considerably less than half an hour.

At the Borough of Brownsville this work intersects the National Road, from which (although as yet comparatively unknown,) it has already succeeded in diverting a very large portion of the trade and travel in the direction of the city of Pittsburgh. During the present season, it will be seen by reference to the able and comprehensive report of Wm. M'ELROY, Esq. Superintendent of Cargoes, and to which I beg leave to refer, that besides a very large amount of Merchandise and Produce, passing in both directions, no less than 43,401 passengers have been reported at Lock No. 1. What the amount will be hereafter, in all kinds, it is impossible even to conjecture. There is every reason to believe, however, that with the general publicity which it will have then received, it will almost entirely supersede (and that too, perhaps, in another year,) the use of that portion of the National Road between Brownsville and Wheeling.

But it is not only to the Company itself, or to the travelling and trading public, that this great work holds out such encouraging prospects for the future. There are other interests still more important—interests which were no doubt within the immediate contemplation of the Legislature of Pennsylvania, at the time when they extended so liberal a hand for its support—which are already awakening and moving under the impulse which it has administered to them. It is to the Agricultural, Mining and Manufacturing interests of the important region watered by the Monongahela river and its tributaries, that this improvement is destined to render the most inestimable service. The certainty and regularity of the Navigation at all seasons, except when obstructed by ice, and the consequent reduction of the cost of transportation to about one half of what it had been theretofore, have opened up a ready market for the productions of its coal mines, and given a new and increased value to all property of that description within the reach of this improvement. Until the construction of this work, the only market for the coal of the Monongahela, was the distant market of the South-west, accessible generally at only two periods of the year, and subject to innumerable risks arising from the dangers with which the voyage was attended, the idea of furnishing a supply for the consumption of the city of Pittsburgh, either for manufacturing or domestic purposes, was wholly out of the question. Now, however, the face of things is entirely changed. During the last season, it appears from the report already referred to, that nearly two millions of bushels of coal passed through Lock No. 1, destined

for the Pittsburgh market alone; and the effect upon her manufacturing interests, as well as upon the private comfort of her citizens, is already felt, in the reduction of the cost of this important element of her prosperity, to an extent of not less than thirty per cent.

It is worthy of remark, too, in connection with this subject, that while the mining and agricultural interests are so largely benefited by this improvement, the tax which they are required to pay in return for all these privileges, is so light and inconsiderable, as to be entirely unfelt by them, and scarcely even to deserve the name of a burthen. To illustrate this position, let us take, by way of example, the article of coal, which is at present, and no doubt will continue to be hereafter, the most important branch of the carrying trade upon the Slack Water. It will be seen, by reference to the report already alluded to, that 4,605,185 bushels of coal have been reported at Lock No. 1, during the past season, paying to the Company in toll, for the use of the Navigation, the sum of \$5,283 79, and being at the rate of only  $1\frac{15}{100}$  mills per bushel, or  $3\frac{21}{100}$  cents per gross ton, containing about 28 bushels. This, however, does not include a small toll which is imposed on the returning boats, and which is of course confined to those employed only in the Pittsburgh trade.

While on this subject, it may not be improper to state, that in consequence of the great diversity in the structure of boats employed on the Navigation, for the transportation of coal, it became indispensably necessary to adopt some speedy method for ascertaining the amount of their cargoes in bushels; and for this purpose the Collectors were furnished with graded and figured scales for taking the draught of the boat, the figures indicating the depth of immersion giving a multiplier in bushels and decimals for each superficial foot of surface. This plan possesses the merit of extreme quickness and simplicity, united with as high a degree of accuracy as is attainable in any other mode now in use, for the measurement of coal in boats.

There is another point of view, however, in which this work may be considered important to the country at large. Its successful completion and opening, (although under circumstances the most adverse,) at an expense scarcely one half of that of our ordinary lines of canal, while its capacity for business is so immeasurably greater than any work of that description which has ever yet been constructed, are calculated to furnish another striking illustration of the ad-

vantages of this species of improvement, and thereby to lead to the earlier development of the susceptibilities of our Western streams. To the Ohio river itself, which is the common highway of so many of the States, and to many other of its most important tributaries, its applicability will be found, on examination, to be not less apparent, than to the Monongahela. By this simple and obvious improvement, many of the great Rivers of the West, which are now comparatively useless, because they are navigable only in high water, can be rendered practicable at all seasons, and to an extent heretofore scarcely contemplated; while in some instances, others whose waters have been considered of no value whatever, may be converted into important lines of communication between regions heretofore entirely disconnected.

The principal care and management of this Improvement, has of course, since its completion, passed into the hands of the officers who are charged with the management of the Locks, and collection of Tolls at those points. This arduous and sometimes perplexing duty, has, I am happy to say, been discharged with a degree of skill and prudence highly creditable to the individuals employed, and satisfactory to those concerned in the navigation of the river. No complaints have been heard of any want of promptness or energy, in the exercise of their functions. Boats and other craft, seeking a passage, are despatched in the order in which they arrive, or according to the rules and regulations established by the Board of Managers, and no unnecessary delay or interruption is ever permitted to take place at the locks.

In addition, however, to the ordinary duties incident to their stations, it is proper to add that the collectors and lock keepers are required, by the Board, to exercise a watchful supervision over the works and property of the Company under their charge; to render monthly reports of their condition; to attend, in person, to all ordinary repairs that may be required, and to keep their locks in good order during the period of their employment. These multifarious duties have all been performed in a manner highly creditable to those gentlemen.

From my last Annual Report, dated December 30, 1844, it will be seen that the cost of construction up to that time, was - - - - - \$418,211 28

Carried over

Amount brought forward,	- - -	\$418,211 28
Since that period there has been expended for the same purpose, and principally on unfinished work of the last season,	- - -	17,946 69
To which may be added,		
For Surveys and Engineering;	- - -	15,439 40
“ Repairs,	- - -	22,736 76
“ Real Estate damages, Miscellaneous and Incidental expenses,	- - -	14,133 85
		<hr/>
Making the total cost of the Work,	- - -	\$488,407 98

Having thus submitted to the Board such statements and reflections as were suggested by the general condition and prospects of the Improvement, I proceed now, in conclusion, to the exhibition of a brief statement of the operations during the past year, and the present condition of the several Locks and Dams, of which the work is composed.

*Lock and Dam, No. 1.*

During the past year, the Company have purchased a lot at this point, and erected a permanent brick Dwelling-house and Office for the use of the Collector, and for transacting the important business of this Lock. The Dam has also been replenished with a large quantity of gravel, placed on its upper slope; and that part of the timber and stone work, over the former breach, has, to a considerable extent, been taken up and reconstructed in a more permanent and substantial manner.

*Lock and Dam, No. 2.*

At the time of the last Annual Report, the contractors, MESSRS. MOORHEAD, ROBERTSON & Co. were engaged in raising the walls and cribs of this Lock to an additional elevation of five and a half feet, in conformity with a contract previously entered into for that purpose. The work has since been finished in a very satisfactory manner, with new Mitre Gates and Irons, on an improved plan and of superior workmanship. A Lot has also been purchased at this place, and a brick Dwelling-house erected thereon; an Office has also been built on the Lock wall. This Dam has continued in good order without requiring any expenditure, whatever, for repairs.

*Lock and Dam, No. 3.*

This is one of the new Locks and Dams, constructed in

1844, and which at the time of the last Report was not entirely finished. It sustained, however, the winter and spring floods without injury, and has since been finished in every part, according to the original plan, with some additional protection and security to the work. An Office has been erected near the Lock, and the plan for opening the wicket gates has been changed from the screw formerly used, to the lever and pinion, which are found to work with much greater facility. The action of the water has a tendency to create a bar across the channel below this Lock, at a place where the bed of the river was originally excavated in order to give the required depth of water. This bar has been twice removed, and should it continue to form, it may be necessary hereafter to protect the boat channel by constructing a crib for a short distance from the lower end of the outside Lock wall.

*Lock and Dam, No. 4.*

This work is also of new construction, being built in 1844. During the past season the upper slope of the Dam has been well secured with a large quantity of gravel; the banks near the abutment and all weak points have been protected with stone; a new Office has been erected near the Lock, and a brick Dwelling-house has been purchased by the Company for the use of the Collector. The works at this point are of superior construction, in good condition and fine working order.

By direction of the Board of Managers, each of the three upper Locks has been furnished with light and substantial Iron Railings, placed on the upper edge of the Mitre Gates, so arranged as not to obstruct the action of the Wicket Levers, or the passage of boats and other craft through the Locks; they also form a very necessary protection to those engaged in opening the Wickets, enabling them to pass to and fro over the gates with perfect security. The Lock Gates and Irons have also been painted.

All the works connected with the Navigation, are now in good order, and a confident expectation may be entertained that they will so continue, for a number of years, requiring but a small expenditure for ordinary repairs.

Respectfully submitted,

SYLVANUS LOTHROP,

JANUARY 3, 1846.

*Engineer.*





## REPORT

O F

WILLIAM M'ELLROY, ESQ.

*To the President and Managers of the Monongahela Navigation Company:*

GENTLEMEN,—The official notice of my appointment, as Inspector of Cargoes for the Company, on the 4th day of February last, defined my duties under three heads: First, to attend to the lading and unlading of Boats, in order to insure *correct manifests*. Secondly, to *Audit* the accounts of the Collectors. Thirdly, to keep statistics of the *trade and travel* on the Improvement.

The duties under the first head have been by far the most arduous and important, and a brief notice of them, exhibiting the nature of the business, may, now, at the close of the first year's operations, be of some use, especially in framing regulations for the ensuing season.

In assuming the duties of the office, I soon found that the only method of insuring correct manifests of goods shipped from Pittsburgh, was to attend at the Boats and make them. A great portion of the freights *up* belong to men who come to the city, make their purchases at sundry places, get their goods on board as they can, and generally arrive about the time the boat is starting, with nothing but the bills of prices, caring nothing about bills of lading. It is also a common thing for bills of lading of large regular shipments to arrive after the departure of the boats, so that the certainty of obtaining correct manifests, depends, in almost every case, upon taking the weights of the goods as they arrive at the wharf. This has been strictly insisted upon, and when not satisfactorily attended to, I have, as far as possible, done it myself, or corrected omissions in the receiving books, by attention to the marks and principal items of freight. Frequently I have been obliged to defer charging entire bills until they came to hand, entering them the next trip. Iron, Pig-metal, and Lumber, are commonly shipped without

weight or measure. These I have either deferred altogether, or estimated, making memorandums and then adjusting the charge when the bills came to hand.

It is evident from these facts that the freights *up* could neither be known nor correctly classified to prevent detention at Lock No. 1, without making the manifests and keeping the run of the business. Clerks themselves often cannot know what is taken on Board in the hurry of starting, and they can scarcely come at it when once stowed away. The system, therefore, of giving in an amount at random (as was done for a few trips at first) and afterwards correcting, will never work well. A fair classification and full return would require too much search and troublesome alteration, were there even no doubt of the disposition to do right under circumstances which put it out of the power of the most vigilant agent to detect frauds, errors or omissions. From the manifest a slip has always been prepared for the collector at No. 1, condensing the whole into the form of the clearance. This slip is deposited at No. 1, as well for reference as to enable the Collector to register the tonnage and toll without delaying the boat. The manifest is taken on and deposited with the clearance at the last Lock.

There is not the same difficulty with the *down* freights, excepting Iron, Nails, Pig-metal and Grain, these belong chiefly to the miscellaneous class; are taken on in lots by count and charged by count. Most of the goods requiring classification are Merchandise, in the fall and spring, belong to class No. 1, and are necessarily accompanied by bills of lading. Instead of depositing the *down* manifests at the last Lock, they have been delivered to me, and any errors or omissions corrected by the inspection of the goods and reference, when necessary, to the freight books of the Boats and bills of lading. The manifests are then returned to Lock No. 1. Thus, the correction of the Cargoes both ways is left to the Inspector, and errors in calculation are all corrected by the Collectors at each end of the route, by a comparison of the manifests and clearances, and the differences adjusted on the clearance of each Boat on her return trip.

Window Glass and Oats have given more trouble than all other *down* freights. The regulations should require the brand as well as the No. of the boxes in each lot to be noted on the manifest. Lots from different manufacturers, some with fictitious brands, are frequently found in the same cargo. By having the No. and brand of each lot, frauds and errors

may more readily be discovered; to count the whole being sometimes impossible without neglecting other matters equally pressing and important.

The only guide in estimating Oats, is the number and size of the bags. They have been generally cleared at  $3\frac{1}{2}$  bushels per bag, and any difference discovered when unloaded, charged on the up trip.

Freight in Keel Boats is a matter of considerable importance. They frequently occupy several days unloading and taking in their cargoes, &c. It has been difficult to find the masters, their times of starting, &c. from the fact that the office and duties of Inspector were not set forth in the regulations. Tow Boats should be prohibited under a penalty from taking them into Lock No. 1, without a manifest and classification from the Inspector. This would cause all to be brought satisfactorily before the Inspector, even when the Keels are in charge of men who know nothing about tolls or manifests, as is often the case.

Upon the whole I am satisfied that the Company has lost nothing worth noticing, in freight tolls; but I regret to add that I cannot say this in reference to passenger tolls. In abandoning the clause requiring these returns to be made on oath or affirmation, that branch of the revenue was surrendered to the discretion of the clerks and masters of the Boats—an unusual and impolitic concession.

The annexed table of returns for the year, will aid in estimating for the future, and will show that justice to all inclined to do a fair business on the river, as well as to the Company, requires some efficient step to be taken on this subject.

In auditing the accounts of the Collectors, the clearance and permits have all been carefully examined, compared with the check rolls weekly, and all errors and omissions, not previously corrected at the Locks, entered in a book in which an account is opened with each Collector. From this book which also serves for settling the Treasurer's account, a settlement is transmitted to each of the Collectors, quarterly, signed by the Treasurer and Inspector, and the amount of errors accruing is corrected in the next weekly reports after the receipt of such settlements.

The system of collection has worked well, causing little or no detention to Boats, and the errors, none of which have escaped correction, have been very few considering the nature of the business. I cannot see that the forms of the Registers, Check Rolls, and Clearances, are susceptible of any

change for the better while the tolls continue to be charged as they now are. I also deem it due to the Collectors to state that they have discharged their various duties, relative to the collection of tolls and the supervision and care of the works under their charge, with the greatest fidelity and vigilance.

The manner in which the Tonnage, Travel, &c. has been kept, will appear from the books in the office. Each line of the Tonnage book contains an abstract of the entire business, weekly; exhibiting the different kinds of Freight, the Coal Trade, Local Trade of Pool No. 1, Freight Tolls, Passenger Tolls, and the total amount of Tolls, with the amount at each Lock, and the number of Through and Way Passengers. These items as shown in the annexed statements, exhibit the following result for the year ending December 31, 1845.

Receipts from Freights, Rafts, Empty Flats, and Flat Bottom Boats, inclusive, - - - - -	\$15,173 88
Receipts from Passengers, - - - - -	8,122 03
“ “ Coal, - - - - -	5,283 79
Total Tolls, year ending Dec. 31, 1845, —————	\$28,579 70

*Receipts at the several Locks.*

Lock No. 1, - - - - -	\$16,640 80
“ No. 2, - - - - -	3,464 38
“ No. 3, - - - - -	1,769 07
“ No. 4, - - - - -	6,725 45
Total, as above, - - - - -	—————\$28,579 70

		S. Boats.	Keels & Flats.
Cleared Eastward, - - - - -		1,041	596
“ Westward, - - - - -		1,023	827
		—————	—————

*Trade of Pool No. 1, both ways.* Passage Lock No. 1.

Tow Boats, - - - - -	1,490
Flats, - - - - -	4,728

## STATEMENT

*Of Freight Shipped both ways on the Monongahela Slack  
Water, during the year ending Dec. 31, 1845.*

Shipped Eastward from Pittsburgh.		Arrived Westward at Pittsburgh.	
Salt, Barrels, - - -	5,971	Flour, Barrels, - - -	27,839
Whiskey, " - - -	622	Whiskey, " - - -	5,753
Molasses " - - -	916	Salt, " - - -	1,958
Beer, " - - -	228	Apples, " - - -	12,061
Flour, " - - -	557	Cider, " - - -	123
Empty Barrels, - - -	2,171	Empty Barrels, - - -	1,164
Seeds, Bushels, - - -	460	Seeds, Bushels, - - -	3,326
Lime, " - - -	248	Lime, " - - -	49,037
Dried Fruit, " - - -	81	Dried Fruit, " - - -	2,189
Potatoes, " - - -	403	Potatoes, " - - -	16,090
Wagons, Count, - - -	29	Sand, " - - -	33,550
Horses, " - - -	62	Wood, Cords, - - -	103
Ploughs, " - - -	118	Bark, " - - -	57
Shingles, " - - -	347,000	Stone, Perches, - - -	4,371
Hoop-poles " - - -	2,000	Glass, Boxes, - - -	47,331
Brick, " - - -	37,094	Staves, Count - - -	45,834
Lath, " - - -	54,215	Hoop-poles, " - - -	45,350
Staves, " - - -	4,000	Posts, " - - -	3,848
Timber, Feet Lineal, - - -	20,973	Brick, " - - -	760,100
Boards, " Inch Meas. 792,395		Boards, Feet, - - -	331,720
{ Iron, Pounds, - - -	367,140	Timber, " Lineal, 169,417	
* { Nails, " - - -	105,586	{ Iron, Pounds, - - -	998,052
{ Pig Iron, " - - -	2,049,833	* { Nails, " - - -	1,343,800
Bacon, " - - -	249,625	{ Pig Iron, " - - -	771,245
Tobacco, " - - -	245,603	Bacon, " - - -	18,674
Other classed Freight, lbs. 5,809,360		Horses, Count, - - -	82
Total pounds Eastward,		Hogs, " - - -	154
exclusive of Shingles,		Other classed Freight, lbs. 6,359,365	
Lath, Brick, Timber,		Total pounds Westward,	
Lumber of all kinds, -----		exclusive of Sand, Hoop	
&c. - - - - -	12,961,959	poles, Wood, Staves,	
		Posts, Bark, Boards,	
		Timber, Stone, Brick, -----	
		Coal, &c. - - -	27,257,870

\* Iron, Nails and Pig Iron, are given only since the 1st of March, and being classed, could not always be correctly separated from other Freights of the same classes. Besides Pig Iron carried in Flats, and weight not known till afterwards, was sometimes unavoidably overlooked in the Tonnage account. The amount of these items, therefore, as given above, is considerably under the actual amount upon which toll was paid during the season. In other respects the statement is strictly correct.









## REPORT

OF

WILLIAM M'ELLROY, ESQ.

-----

*To the President and Managers of the Monongahela Navigation Company:*

GENTLEMEN,—The official notice of my appointment, as Inspector of Cargoes for the Company, on the 4th day of February last, defined my duties under three heads: First, to attend to the lading and unlading of Boats, in order to insure *correct manifests*. Secondly, to *Audit* the accounts of the Collectors. Thirdly, to keep statistics of the *trade and travel* on the Improvement.

The duties under the first head have been by far the most arduous and important, and a brief notice of them, exhibiting the nature of the business, may, now, at the close of the first year's operations, be of some use, especially in framing regulations for the ensuing season.

In assuming the duties of the office, I soon found that the only method of insuring correct manifests of goods shipped from Pittsburgh, was to attend at the Boats and make them. A great portion of the freights *up* belong to men who come to the city, make their purchases at sundry places, get their goods on board as they can, and generally arrive about the time the boat is starting, with nothing but the bills of prices, caring nothing about bills of lading. It is also a common thing for bills of lading of large regular shipments to arrive after the departure of the boats, so that the certainty of obtaining correct manifests, depends, in almost every case, upon taking the weights of the goods as they arrive at the wharf. This has been strictly insisted upon, and when not satisfactorily attended to, I have, as far as possible, done it myself, or corrected omissions in the receiving books, by attention to the marks and principal items of freight. Frequently I have been obliged to defer charging entire bills until they came to hand, entering them the next trip. Iron, Pig-metal, and Lumber, are commonly shipped without

weight or measure. These I have either deferred altogether, or estimated, making memorandums and then adjusting the charge when the bills came to hand.

It is evident from these facts that the freights *up* could neither be known nor correctly classified to prevent detention at Lock No. 1, without making the manifests and keeping the run of the business. Clerks themselves often cannot know what is taken on Board in the hurry of starting, and they can scarcely come at it when once stowed away. The system, therefore, of giving in an amount at random (as was done for a few trips at first) and afterwards correcting, will never work well. A fair classification and full return would require too much search and troublesome alteration, were there even no doubt of the disposition to do right under circumstances which put it out of the power of the most vigilant agent to detect frauds, errors or omissions. From the manifest a slip has always been prepared for the collector at No. 1, condensing the whole into the form of the clearance. This slip is deposited at No. 1, as well for reference as to enable the Collector to register the tonnage and toll without delaying the boat. The manifest is taken on and deposited with the clearance at the last Lock.

There is not the same difficulty with the *down* freights, excepting Iron, Nails, Pig-metal and Grain, these belong chiefly to the miscellaneous class; are taken on in lots by count and charged by count. Most of the goods requiring classification are Merchandise, in the fall and spring, belong to class No. 1, and are necessarily accompanied by bills of lading. Instead of depositing the *down* manifests at the last Lock, they have been delivered to me, and any errors or omissions corrected by the inspection of the goods and reference, when necessary, to the freight books of the Boats and bills of lading. The manifests are then returned to Lock No. 1. Thus, the correction of the Cargoes both ways is left to the Inspector, and errors in calculation are all corrected by the Collectors at each end of the route, by a comparison of the manifests and clearances, and the differences adjusted on the clearance of each Boat on her return trip.

Window Glass and Oats have given more trouble than all other *down* freights. The regulations should require the brand as well as the No. of the boxes in each lot to be noted on the manifest. Lots from different manufacturers, some with fictitious brands, are frequently found in the same cargo. By having the No. and brand of each lot, frauds and errors

may more readily be discovered; to count the whole being sometimes impossible without neglecting other matters equally pressing and important.

The only guide in estimating Oats, is the number and size of the bags. They have been generally cleared at  $3\frac{1}{2}$  bushels per bag, and any difference discovered when unloaded, charged on the up trip.

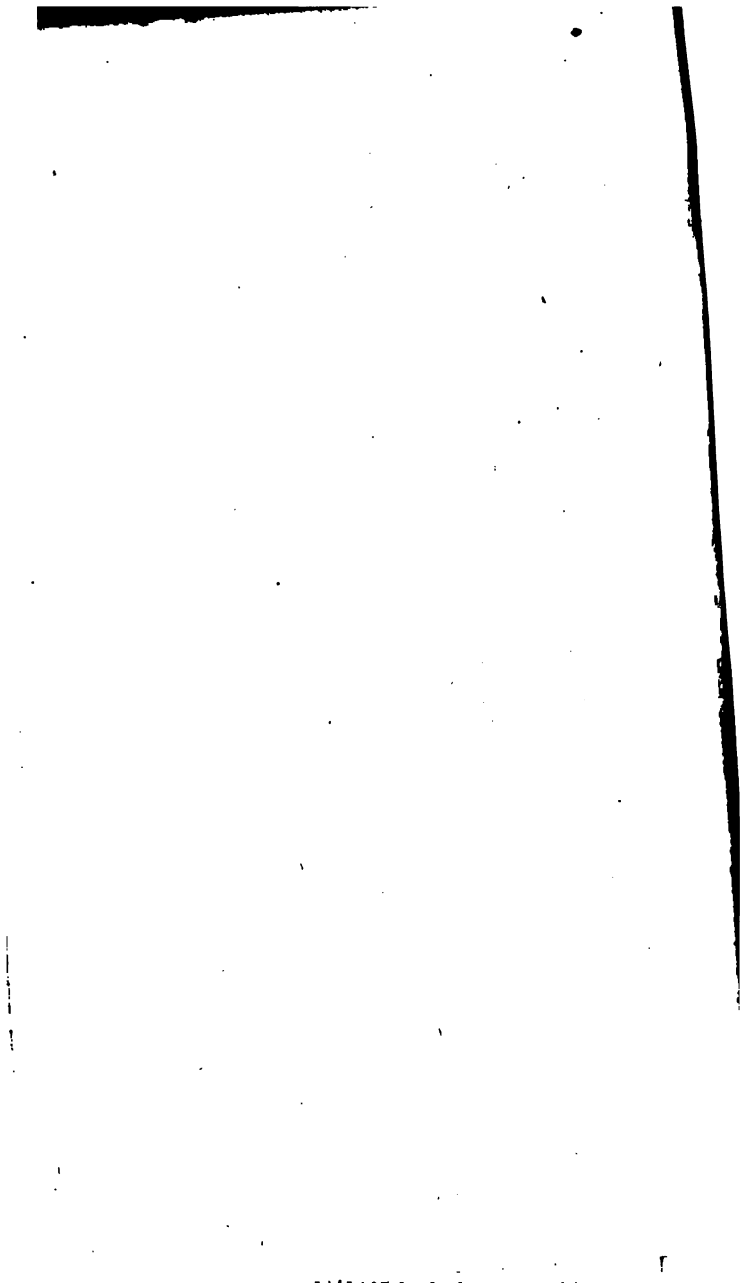
Freight in Keel Boats is a matter of considerable importance. They frequently occupy several days unloading and taking in their cargoes, &c. It has been difficult to find the masters, their times of starting, &c. from the fact that the office and duties of Inspector were not set forth in the regulations. Tow Boats should be prohibited under a penalty from taking them into Lock No. 1, without a manifest and classification from the Inspector. This would cause all to be brought satisfactorily before the Inspector, even when the Keels are in charge of men who know nothing about tolls or manifests, as is often the case.

Upon the whole I am satisfied that the Company has lost nothing worth noticing, in freight tolls; but I regret to add that I cannot say this in reference to passenger tolls. In abandoning the clause requiring these returns to be made on oath or affirmation, that branch of the revenue was surrendered to the discretion of the clerks and masters of the Boats—an unusual and impolitic concession.

The annexed table of returns for the year, will aid in estimating for the future, and will show that justice to all inclined to do a fair business on the river, as well as to the Company, requires some efficient step to be taken on this subject.

In auditing the accounts of the Collectors, the clearance and permits have all been carefully examined, compared with the check rolls weekly, and all errors and omissions, not previously corrected at the Locks, entered in a book in which an account is opened with each Collector. From this book which also serves for settling the Treasurer's account, a settlement is transmitted to each of the Collectors, quarterly, signed by the Treasurer and Inspector, and the amount of errors accruing is corrected in the next weekly reports after the receipt of such settlements.

The system of collection has worked well, causing little or no detention to Boats, and the errors, none of which have escaped correction, have been very few considering the nature of the business. I cannot see that the forms of the Registers, Check Rolls, and Clearances, are susceptible of any



Statements from the Collectors at Locks Nos. 1, and 3, accompany this Report. The Collectors at Locks Nos. 2, and 4; have no suggestions to make. The difficulty arising from the clause giving a preference to Passenger and Mail Boats, is the principal one with which they have had to contend, and they leave the matter with the Managers.

Respectfully submitted,

WILLIAM M'ELLROY,

JANUARY 5, 1846.

*Inspector, &c.*

*Account current of MOORHEAD, ROBERTSON & Co. (Mortgages) with the Monongahela Navigation Company, exhibiting the Receipts and Disbursements for the year 1845.*

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**RECEIPTS OF TOLLS.**

<b>1845.</b>			
April.....1,	Tolls at Lock No. 1, last quarter,	\$2,921	08
“ “ “	“ “ 2, “	660	78
“ “ “	“ “ 3, “	429	20
“ “ “	“ “ 4, “	1,938	47
	Total for quarter, ending April 1,	<u>\$5,949</u>	<u>53</u>
July.....1,	Tolls at Lock No. 1, last quarter,	\$4,899	21
“ “ “	“ “ 2, “	1,322	01
“ “ “	“ “ 3, “	570	28
“ “ “	“ “ 4, “	2,262	87
	Total for quarter, ending July 1,	<u>\$9,054</u>	<u>37</u>
October. 2,	Tolls at Lock No. 1, last quarter,	\$4,498	35
“ “ “	“ “ 2, “	376	63
“ “ “	“ “ 3, “	249	84
“ “ “	“ “ 4, “	1,002	08
	Total for quarter, ending Oct. 1,	<u>\$6,126</u>	<u>90</u>
Decem. 31,	Tolls at Lock No. 1, last quarter,	\$4,322	16
“ “ “	“ “ 2, “	1,103	46
“ “ “	“ “ 3, “	499	18
“ “ “	“ “ 4, “	1,522	03
	Total for quarter, ending Dec. 31,	<u>\$7,446</u>	<u>83</u>

---

**RECAPITULATION.**

<b>1845.</b>			
April...1,	Receipts last quarter,	- - -	\$5,949 53
July....1,	do do	- - -	9,054 37
October 1,	do do	- - -	6,126 90
Dec....31,	do do	- - -	7,446 83
“ “	Balance brought from last year,		4,708 78
	Total Receipts,	- - -	<u>\$33,286 41</u>
Dec....31,	To Balance,	- - -	211 11

## DISBURSEMENTS.

1845.

April....1,	Debts paid last quarter,	- - -	\$2,283 42
"	Salaries, " " - - -	- - -	1,461 10
"	Expenses, " " - - -	- - -	1,258 23
"	Interest, " " - - -	- - -	61 87
	Total for quarter, ending April 1,		<u>\$5,064 62</u>
July.....1,	Debts paid last quarter,	- - -	\$ 703 50
"	Salaries, " " - - -	- - -	300 00
"	Expenses, " " - - -	- - -	1,760 79
"	Interest, " " - - -	- - -	7,518 88
"	Repairs, " " - - -	- - -	654 27
"	Allston & Hannay, paid them,		289 70
	Total for quarter, ending July 1,		<u>\$11,227 14</u>
October. 1,	Debts paid last quarter,	- - -	\$1,267 50
"	Salaries, " " - - -	- - -	475 00
"	Expenses, " " - - -	- - -	1,655 60
"	Interest, " " - - -	- - -	340 29
"	Repairs, " " - - -	- - -	37 57
	Total for quarter, ending Oct. 1,		<u>\$3,775 96</u>
Dec....31,	Debts paid last quarter,	- - -	\$3,899 08
"	Salaries, " " - - -	- - -	403 50
"	Expenses, " " - - -	- - -	1,098 75
"	Interest, " " - - -	- - -	6,679 29
"	Repairs, " " - - -	- - -	426 96
"	Lock House,	- - -	500 00
	Total for quarter, ending Dec. 31,		<u>\$13,007 58</u>

## RECAPITULATION.

1845.

April....1,	Disbursements last quarter,	-	\$ 5,064 62
July.....1,	do do - - -	- - -	11,227 14
October. 1,	do do - - -	- - -	3,775 96
Dec....31,	do do - - -	- - -	13,007 58
"	Balance to account next year,	-	211 11
	Total Disbursements for 1845,	-	<u>\$33,286 41</u>

THOS. M. HOWE,

DECEMBER 31, 1845.

Treasurer, M. N. C.



PITTSBURGH, *January 5, 1846.*

At a meeting of the Stockholders of the Monongahela Navigation Company, held this day, the following gentlemen were elected Officers and Managers for the year 1846:

PRESIDENT—JOHN B. BUTLER.

TREASURER—THOMAS M. HOWE.

**MANAGERS,**

JOHN ANDERSON,	JOHN L. DAWSON,
THOMAS BAKEWELL	WILLIAM EICHBAUM,
JAS. W. BURBRIDGE,	SAMUEL R. JOHNSTON,
GEO. W. CASS,	JAS. K. MOORHEAD,
NEVILLE B. CRAIG,	R. C. TOWNSEND.

SECRETARY—WILLIAM BAKEWELL.

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**COMMITTEES FOR THE YEAR 1846.**  
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**ON CLAIMS AND ACCOUNTS.**

J. K. MOORHEAD,	J. W. BURBRIDGE,
WM. EICHBAUM.	JOHN L. DAWSON.

**ON REPAIRS.**

JOHN ANDERSON,	J. K. MOORHEAD,
REESE C. TOWNSEND,	JOHN L. DAWSON.

**ON TOLLS.**

THOMAS BAKEWELL,	JOHN ANDERSON,
SAMUEL R. JOHNSTON,	GEORGE W. CASS.

SEVENTH  
ANNUAL REPORT  
OF THE  
PRESIDENT AND MANAGERS  
TO THE  
Monongahela Navigation Co.

*Presented January, 1847,*

WITH THE  
ACCOMPANYING DOCUMENTS.

.....  
SECOND EDITION.  
.....

PITTSBURGH:  
BAKEWELL & MARTENS, 71 GRANT ST. & 75 WOOD ST.  
1871.

opposition that (strange as it may *now* appear) manifested itself along the line of this valuable improvement and deterred many from engaging in its prosecution; such a combination of adverse circumstances entirely overwhelmed the prospects of the Company for the time being, and not only caused a suspension of the unfinished portion of the work, being Locks and Dams Nos. 3 and 4, but so completely shrouded its future prospects, that the Board at that time were unable to raise sufficient means to keep in repair Dams Nos. 1 and 2, which had been completed and opened for navigation on the 18th of October, 1841. During this period of suspension a serious breach occurred in Dam No. 1, which removed more than one hundred feet of the dam, and washed out the river bottom to a depth of nearly forty feet. The work in this dilapidated condition was a nuisance to the navigation, and a source of mortification to its friends; with debts for construction and damages due to contractors and others (amounting to more than forty thousand dollars), who were loudly demanding payment. Suits and judgments accumulated against the Company, and their personal effects were sold by the sheriff. When, in the fall of 1843, the stocks held by the State in all corporations were sold at auction, the stock in this Company was purchased by our citizens, and the purchasers made a proposition to complete the work to Brownsville, taking in payment the bonds of the Company, payable, in ten years after date: the works mortgaged, and the tolls pledged to pay—first, expenses and repairs; secondly old debts; and thirdly, to liquidate the bonds. And to the successful consummation of this arrangement you are now indebted for this magnificent Improvement, which we believe to be equal if not superior to any artificial navigation in the United States.

We have now passed the second year since the completion of the work, and it is gratifying to be able to state, that at no period since the commencement of the undertaking has its prospects been so bright. The amount of tolls received during the present year show a great increase of business over

that of last year, and must be regarded as an earnest of what is to follow. The trade of the Monongahela Valley is rapidly increasing, the banks of the river are fast becoming lined with manufacturing villages, the coal business is just beginning to be developed, and from the great extent of the Ohio and Mississippi Valleys, which must receive their main supply from thence, may expect its continued and rapid increase; [in fact, it is no great stretch of imagination to look forward to a period, when the tolls from coal alone, at the present *very low rates*, will pay interest on the entire cost of the work.] Another great source of revenue will be the iron trade, when that region of country is reached by the Improvement. That part of our State bordering on the Virginia line, and the State of Virginia along the banks of Cheat and Monongahela rivers, abounds with iron ore and timber; there are several valuable iron works in operation, but the difficulty of reaching a market has prevented a more extensive development of the resources and wealth of this region. The great convenience afforded by our Improvement and its complete success, has not been lost upon the enterprising citizens of that portion of the "Old Dominion," and an application is now making to their Legislature, to incorporate a Company, to make a Slack-water Navigation from the State line to Clarksburg, a distance of nearly one hundred miles, running through an exceedingly rich and fertile valley; and as this portion of the State has never received any benefit from former expenditures of public moneys, in the way of improvements, it is fair to presume that what they now ask will be liberally granted to them, and that the State will subscribe a sufficient amount of stock to put it within the reach of individual enterprise to complete the work. Should this be done, it at once becomes *necessary*, and it is now important, that our work be completed to the State line; and to accomplish this most desirable object, the efforts of this Company should be directed.

The great obstacle in the way, is the large indebtedness of the Company, as follows:

The entire cost of the work, including Engineering, Damages, &c., was.....	\$497,672 86
Paid, by subscription of Stock,.....	246,571 89
Paid Bonds issued and outstanding,.....	231,500 00
Old debts and damages, due and paid.....	12,467 15

The balance, together with the interest on the bonds and debts, has been paid from tolls. Therefore, about one-half of the total cost, is a debt still hanging over the Company; the progress of liquidation for some years will be slow, as it consumes so large a portion of the receipts to pay interest; but as the principal becomes reduced, and the revenue still increasing, it will work more rapidly; and the Board believe, that by the present regular process, seven years' receipts will entirely extinguish the debt, if no serious disaster happens to the work.

In addition to the present indebtedness of the Company, it has become necessary, owing to the great increase of business on Pool No. 1, and the fact that the coal boats wait immediately above that Lock, in great numbers for a freshet, either to extend Lock No. 1 to such a length as to be able to pass two pairs of coal boats, or to build an entire new lock. One of these alternatives should be adopted, to accommodate the trade, and by either we will remedy the present difficulty in passing that Lock at low water. Should the first suggestion be adopted, the cost will be about ten thousand dollars, and if a new Lock is built, it will cost twenty thousand dollars, which will increase the indebtedness of the Company to that amount, and the revenues are pledged to the mortgagees, for specific purposes, and cannot be otherwise used, except with their consent. Such being the present financial condition of the Company, it would be preposterous in the extreme to think of extending the work to the State line, without aid from the citizens by new subscriptions of stock. But why should we not confidently expect such aid? The revenue received *this season*, would fully justify such an investment, for although the work, owing to the causes alluded to in the commencement of this Report, has cost from one hundred and fifty to two hundred thousand dollars more than it would have

cost, if the Company had been in possession of funds to have driven it through from the commencement; yet we find that now, in the second year of its operation, the *net* revenue, after deducting expenses and repairs, is equal to six per cent. on the entire cost, with the prospect of a regular and heavy increase of business; so that we may look forward to our work shortly paying 10 per cent. per annum on the cost. Where then, we ask, could a better investment of money be made? The Board would therefore recommend that books be opened for a subscription of stock to extend the work to the State line, and that as soon as one hundred and fifty thousand dollars be subscribed, the work to be placed under contract.

It may not be deemed out of place in this connection, to advert to the fact, that an act of Incorporation has been passed by the Legislature, authorizing the construction of a Slack-water Navigation on the Youghiogheny river this is a subject which commends itself strongly to the favorable regard of the stockholders of the Monongahela Improvement, as well as of citizens generally. The Youghiogheny passes through one of the finest agricultural districts of Pennsylvania, and its banks abound in extensive deposits of coal and iron ore, and when once that important tributary of the Monongahela is improved, it must add largely to the revenue of our improvement, and tend to swell the rapidly augmenting trade of Pittsburgh.

It will be recollected that our original charter contemplated building of dams not exceeding four feet in height, and it was then intended that the locks should be used during low water, and the dams would afford but little impediment to the navigation during high water; it was found, however entirely impracticable to construct the navigation in that way, and the result of an application to the Legislature, was authority to build dams eight feet high, under which the works were constructed—by raising the dams from four to eight feet high, the project of passing over the dams was abandoned and an exclusive lock navigation substituted: that being the case, there does not appear to be any good reason

## OFFICERS.



PRESIDENT.

JOHN B. BUTLER.

TREASURER.

THOS. M. HOWE.

SECRETARY.

WM. BAKEWELL.

MANAGERS.

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S. R. JOHNSTON,

JAS. K. MOORHEAD,

R. C. TOWNSEND.

TO THE STOCKHOLDERS  
OF THE  
Monongahela Navigation Company.

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IN presenting this, the Seventh Annual Report, the Board would take a retrospective view of the affairs of the Company, show what has been accomplished, and refer to what is yet in prospect.

An act "To authorize the Governor to incorporate a Company to make a Lock Navigation on the river Monongahela," became a law on the 31st day of March, 1836. Under the provisions of this Act the Company was organized February 10th, 1837, and in the month of April following the services of a competent Engineer were engaged; but owing to high waters, and the derangement of the monetary concerns of the country at that period, the survey and exploration of the river was deferred until 1838; and on the 17th December of that year, Locks and Dams Nos. 1 and 2 were placed under contract; and on the 15th of July, 1840, Locks and Dams Nos. 3 and 4 were also allotted to contractors; but owing to the pecuniary embarrassments of the Company, the work on the two last mentioned Locks was suspended. In the spring of 1841, the failure of the Bank of the United States to pay the second subscription (\$50,000) of stock to the Company, the inability of the Commonwealth at that time to meet her subscription in any other way than by the issue of State bonds, which were disposed of at a ruinous sacrifice, the difficulty and pressure in the money market disabling many subscribers from meeting their engagements, and a general feeling of



opposition that (strange as it may *now* appear) manifested itself along the line of this valuable improvement and deterred many from engaging in its prosecution; such a combination of adverse circumstances entirely overwhelmed the prospects of the Company for the time being, and not only caused a suspension of the unfinished portion of the work, being Locks and Dams Nos. 3 and 4, but so completely shrouded its future prospects, that the Board at that time were unable to raise sufficient means to keep in repair Dams Nos. 1 and 2, which had been completed and opened for navigation on the 18th of October, 1841. During this period of suspension a serious breach occurred in Dam No. 1, which removed more than one hundred feet of the dam, and washed out the river bottom to a depth of nearly forty feet. The work in this dilapidated condition was a nuisance to the navigation, and a source of mortification to its friends; with debts for construction and damages due to contractors and others (amounting to more than forty thousand dollars), who were loudly demanding payment. Suits and judgments accumulated against the Company, and their personal effects were sold by the 'sheriff. When, in the fall of 1843, the stocks held by the State in all corporations were sold at auction, the stock in this Company was purchased by our citizens, and the purchasers made a proposition to complete the work to Brownsville, taking in payment the bonds of the Company, payable, in ten years after date: the works mortgaged, and the tolls pledged to pay—first, expenses and repairs; secondly old debts; and thirdly, to liquidate the bonds. And to the successful consummation of this arrangement you are now indebted for this magnificent Improvement, which we believe to be equal if not superior to any artificial navigation in the United States.

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Paid Bonds issued and outstanding,.....	231,600 00
Old debts and damages, due and paid.....	12,467 15

The balance, together with the interest on the bonds and debts, has been paid from tolls. Therefore, about one-half of the total cost, is a debt still hanging over the Company; the progress of liquidation for some years will be slow, as it consumes so large a portion of the receipts to pay interest; but as the principal becomes reduced, and the revenue still increasing, it will work more rapidly; and the Board believe, that by the present regular process, seven years' receipts will entirely extinguish the debt, if no serious disaster happens to the work.

In addition to the present indebtedness of the Company, it has become necessary, owing to the great increase of business on Pool No. 1, and the fact that the coal boats wait immediately above that Lock, in great numbers for a freshet, either to extend Lock No. 1 to such a length as to be able to pass two pairs of coal boats, or to build an entire new lock. One of these alternatives should be adopted, to accommodate the trade, and by either we will remedy the present difficulty in passing that Lock at low water. Should the first suggestion be adopted, the cost will be about ten thousand dollars, and if a new Lock is built, it will cost twenty thousand dollars, which will increase the indebtedness of the Company to that amount, and the revenues are pledged to the mortgagees, for specific purposes, and cannot be otherwise used, except with their consent. Such being the present financial condition of the Company, it would be preposterous in the extreme to think of extending the work to the State line, without aid from the citizens by new subscriptions of stock. But why should we not confidently expect such aid? The revenue received *this season*, would fully justify such an investment, for although the work, owing to the causes alluded to in the commencement of this Report, has cost from one hundred and fifty to two hundred thousand dollars more than it would have

cost, if the Company had been in possession of funds to have driven it through from the commencement; yet we find that now, in the second year of its operation, the *net* revenue, after deducting expenses and repairs, is equal to six per cent. on the entire cost, with the prospect of a regular and heavy increase of business; so that we may look forward to our work shortly paying 10 per cent. per annum on the cost. Where then, we ask, could a better investment of money be made? The Board would therefore recommend that books be opened for a subscription of stock to extend the work to the State line, and that as soon as one hundred and fifty thousand dollars be subscribed, the work to be placed under contract.

It may not be deemed out of place in this connection, to advert to the fact, that an act of Incorporation has been passed by the Legislature, authorizing the construction of a Slack-water Navigation on the Youghiogheny river this is a subject which commends itself strongly to the favorable regard of the stockholders of the Monongahela Improvement, as well as of citizens generally. The Youghiogheny passes through one of the finest agricultural districts of Pennsylvania, and its banks abound in extensive deposits of coal and iron ore, and when once that important tributary of the Monongahela is improved, it must add largely to the revenue of our improvement, and tend to swell the rapidly augmenting trade of Pittsburgh.

It will be recollected that our original charter contemplated building of dams not exceeding four feet in height, and it was then intended that the locks should be used during low water, and the dams would afford but little impediment to the navigation during high water; it was found, however entirely impracticable to construct the navigation in that way, and the result of an application to the Legislature, was authority to build dams eight feet high, under which the works were constructed—by raising the dams from four to eight feet high, the project of passing over the dams was abandoned and an exclusive lock navigation substituted: that being the case, there does not appear to be any good reason

why the height of the dams should be limited otherwise than by the formation of the banks of the river, the expenses of construction and general expediency. For instance, at some points on the river where the banks are high, or where there are hills on both sides, a dam of ten, twelve, or even fifteen feet, might be constructed; and by this means the cost of construction would not only be greatly reduced, but the convenience and facility of using the Navigation be promoted, for all time to come, by the reduced number of locks. And when it is considered that from Brownsville to the State line, a distance of  $35\frac{11}{100}$  miles, the ascent is  $41\frac{4}{100}$  feet, or about 14 inches per mile; whilst from Pittsburgh to Brownsville, a distance of  $55\frac{45}{100}$  miles, the ascent is only  $33\frac{5}{100}$  feet, or about 7 inches per mile, the necessity of such a change becomes more apparent. It would therefore be wise to ask the Legislature for authority to construct the dams to such a height as may be deemed expedient. Should this privilege be granted, the stock should be sought after as a matter of speculation, as the investment required to construct the work would be greatly reduced, and would yield a large return in the way of dividends.

The permanency and stability of our Improvement has been severely tested during the past season, by the tremendous accumulation of ice in the winter months, and a succession of high freshets during the summer, from all of which no material damage accrued to the work; thus establishing firmly the confidence of the friends of the work. For a more detailed account of these floods, see the Report of the Engineer.

The improvements adopted by the Engineer, Mr. Lothrop, in the construction of Dams Nos. 3 and 4, have resulted most favorably; and the repairs on these works during the last year were very trifling indeed, amounting, on both locks and dams, to less than six hundred dollars. Dam No. 1 required a much larger expenditure, owing to the breach spoken of in a former part of this report; the great depth and reaction of the water caused the stone filling to run out of that

portion of the dam, and as this place had given much trouble, it was deemed expedient to make a thorough repair, which was done by putting in a crib twenty-four feet wide, and one hundred and sixty-four feet long, extending entirely across the deep water, which was connected with the old dam, filled with stone, and the covering or sheathing then extending over the whole. This repair, which was *extraordinary*, cost about six thousand dollars. Repairs at No. 2, about eight hundred dollars. The *ordinary* repairs for the entire navigation costing less than two thousand dollars; and we believe this sum, per annum, will be sufficient for a number of years.

For a more detailed condition of the work, I would refer you to the Report of the Engineer herewith; and also to the tabular statement of the Inspector of Cargoes, for a history of the operations coming under his charge for the year.

In conclusion, it is extremely gratifying, that whilst the revenue has realized fully the highest estimate of the most sanguine friends of the improvement, this result is obtained by charging a rate of tolls greatly below that charged on similar improvements in this and adjoining States, particularly on the article of coal.

For instance, the toll on one thousand bushels of coal, passing the entire extent of our navigation, fifty-six miles, through four locks, is only.. .. .	\$ 2 91
On the Muskingum Lock Navigation, Ohio, same dis- tance and quantity,.....	7 36
On the Green and Barren River Nav., Ky., do. say	9 00
“ Schuylkill River Navigation, Pa., do.	11 85
“ Pennsylvania Canal, do.	10 08
“ New York Canal, same distance and quantity,	3 36
“ Eric Extension Canal, Pa. do. do.	7 84
“ Penn'a & Ohio do. Pa. & O. do. do.	10 24

So also of other articles, as may be seen by reference to the rates of toll established on the several improvements above mentioned.

The tolls for the year 1846, amounted to.....	\$43,422	39
do. " 1845, " .....	28,579	70

Being an increase of.....\$14,842 69

Or more than fifty per cent. The increase, as will be seen by the Inspector's statistics, has not been confined to one or a few articles, but has extended to almost everything carried on the river, more especially coal and passengers. And whilst the local travel has greatly increased, it is highly gratifying to be able to state, that the number of stage-passengers has increased from twelve thousand four hundred and fifty-two last year, to twenty thousand and forty-nine this year; all going to prove the increasing popularity of the route, not only as a medium of communication between the east and west; but, also, as a matter of convenience and accommodation to the inhabitants of the valley.

Respectfully submitted.

J. K. MOORHEAD,

*President.*

PITTSBURGH, January 4, 1847.

## REPORT OF SYLVANUS LOTHROP, Esq.

*To the President and Managers of the Monongahela Navigation Company:*

GENTLEMEN—Agreeably to instructions and in conformity with established usage, I have the honor again to submit for your consideration a statement of such matters connected with your Improvement as have fallen within the scope of my official duty, as your Engineer, during the annual period, which is just about to expire, together with such observations and reflections as the occasion is calculated to suggest.

My last annual Report announced the gratifying intelligence of the entire completion of your improvement from Pittsburgh to Brownsville, and left little more to the future, than the ascertainment of its results, and the demonstration of its capacity to withstand the vicissitudes of the seasons, with the ice and floods which so frequently alternate in the valley of the Monongahela. I am happy, however to be enabled to state, that the past year, although remarkable for the rigor of its winter and the inundations by which it was followed—and therefore furnishing one of the most conclusive tests of the durability of your work—has been productive of no damage and led to no expenditure in the shape of repairs, which is even worthy to be recounted.

In the months of December and January last, the ice, which in all our streams had become unusually thick and heavy, was gorged and piled in such fearful masses in your pools, as to inspire serious apprehension of danger, not merely amongst the friends of the Improvement, but to the inhabitants of the country bordering on the banks of the river, By the latter it was feared that their lands would be submerged, and by the former, either that the navigation would



be suspended till a late period in the spring, or that the force of the accumulated flood, as it burst through its mountain barrier, would uproot and sweep from their moorings the locks and dams, which had been erected to confine and gather up the waters of the river. To the astonishment, however, alike of the doubting and dismayed, on the 31st day of January the whole accumulated mass was lifted from its foundations by a sudden flood in the river, and floated off without inflicting the slightest injury upon either of the interests which was expected to be affected, and on the following day the navigation was open and in actual operation the whole distance between Pittsburgh and Brownsville.

The ice, however, has not been the only enemy with which your work has been obliged to contend. Since my last annual Report, the Monongahela valley has been the scene of inundations of a height and frequency almost unexampled in the history of that river. In the month of July its waters rose (above the influence of the slack-water) to the enormous elevation of about forty feet above the low-water mark, devastating the bottoms, sweeping away buildings, fences and other improvements, which were supposed to be beyond the reach of any such casualty, submerging every part of the slack-water, except the abutments of the dams, and covering some of the locks to the depth of ten feet; and yet the only injury sustained by your Company was the removal of two small frame offices from Locks Nos. 3 and 4, and the washing away of a few yards of embankment, unimportant to the security of the work.

It is worthy to be remarked, moreover, in connection with this branch of the subject, that while the floods by which the work has been thus temporarily drowned, have done no sensible injury either to your locks or dams, they have been equally unproductive of delay or inconvenience to the public, as the boats employed in the navigation have been enabled thereby to pass and repass over the dams with perfect security, and without the payment of any tribute in the shape of tolls, so long as the locks continued to be disabled by that cause. It

is indeed a fact of the most gratifying character, and one which is perhaps without a parallel in the history of similar improvements, that although this important line of communication has been in operation for public use, throughout its whole extent, for a period of more than two years, yet in no single instance has any stoppage or delay occurred during all that interval from any failure in the works, or any other cause than obstruction by ice, at the same season when the navigation of our other streams was suspended for the same reason.

It is not to be inferred, however, that the uniformity and regularity with which this important Improvement has performed, even in its infancy, the great object for which it was constructed, and the uninterrupted accommodation which it has afforded to the public have been secured by any considerable outlay of the means of the Company, in the shape of repairs. It is a fact as gratifying as that to which your attention has just been called, that during the last year no expenditure, of any amount, has been required upon the whole line of the work, with the exception of an item of some magnitude connected with the south end of Dam No. 1. That, however, was one of "*extraordinary repair*," which arose out of an unfortunate breach which occurred in that dam soon after its completion, and which, in consequence of the then embarrassed condition of the Company, was suffered to continue until it had washed away the bed of the river to the depth of about forty feet, producing considerable abrasion of the bank, and even threatening to undermine the abutment of the dam itself. This evil was greatly aggravated, if not immediately produced, by the soft and unfavorable nature of the foundation at that point. It is now happily cured, and will probably occasion no further trouble. If it should, however, it may be remedied without much additional expense.

But the experience of the past year has not merely resulted in the ascertainment of the solidity and probable durability of the work itself. It has furnished to its projectors, in the amount of business done upon it, and the revenue which it

has already produced, an earnest of what it is destined to perform at no very distant day. Although but two years old and just beginning to struggle into notoriety, as an avenue for trade and travel between the East and West, it has already yielded a revenue which, after paying expenses, ordinary repairs, and interest upon its large debt, exhibits a surplus equivalent to about eight per centum on its whole capital stock. This, I am inclined to think, is without example in the history of our public works, and may perhaps be mentioned without offence, as a most striking commentary upon the supineness and indifference, and apparent want of sagacity which a few years ago, while running after chimeras, would but for the enterprize of a few public spirited individuals, have suffered this great work, the most important to this city which has ever been constructed, to perish for the want of a few thousand dollars. It is a remarkable fact, that with so many unanswerable arguments to recommend it to, and enforce it upon, the public attention, no work in the country has ever encountered greater obstacles than this. Instead of being, as it ought to have been, fostered by our citizens, and hailed by the inhabitants of the Monongahela valley, as a blessing to themselves, it met with nothing but the most chilling regards from the one, and with either the most violent prejudice, or the most determined hostility from the other. And yet it has already lived to subdue and triumph over both, by increasing the value of the coal lands along the Monongahela to an amount immeasurably beyond its whole cost, and cheapening at the same time, to the consumer here, that important element of our comfort and prosperity, to an extent, annually, which would be far more than equivalent to the interest on the whole investment. It is now, I am happy to say, among the most popular of all our public improvements. Its present advantages are already universally felt, while its future is rapidly unfolding in prospects, as flattering to the land holder of the Monongahela, as to the owners of the Improvement themselves.

And what a prospect is this! I am sensible, gentlemen,

that if I were to permit myself to indulge in the expression of the opinions which I feel authorized to entertain upon this point, I might be regarded by those who are not familiar with this work, as being a little more extravagant than would seem exactly consistent with the gravity of my profession. I cannot, however, forbear a reference to a few facts in relation to this topic, which will perhaps illustrate it as fully as any argument which I could offer.

Before the construction of this work, the Monongahela valley, with its vast agricultural and mineral treasures, and all its capabilities of supply, depending for its outlet upon the unsteady and uncertain navigation of the river in its natural condition, maintained but a slender and precarious trade with the country below. With the city of Pittsburgh its traffic in the article of coal was absolutely nothing, because it could not be relied upon for any permanent and regular supply. In the spring and fall, it is true, advantage was generally taken of the freshets incident to those seasons, for the purpose of despatching a fleet of coal-boats to the towns and cities along the Ohio and Mississippi. The amount, however, of that article thus shipped for the southern market, was very inconsiderable, not exceeding, perhaps, in the most favorable seasons, a million of bushels per annum; and that, too, shipped under great difficulties, arising from the impossibility of loading the boats at a low stage of water, within any convenient distance of the pits.

The effect of the slack-water improvement was to change at once the whole character of the trade. It was no longer necessary to wagon the coal to a convenient point of embarkation. The formation of the pools produced a safe harbor, with a great abundance of water in front of every mine, which enabled its owner to project its contents at once (either by railroad or chute) into the boat which was destined for its reception. But this was not all. The market of Pittsburgh was thrown open for the first time, to the proprietors of the coal-mines, and under the impulse thus administered by your improvement, the trade in the article of coal, which had

maintained but a feeble and sickly existence under the former state of things, started at once into new and active life, springing up in the very first year after the completion of the work, to four and a half millions of bushels, and nearly doubling again in the year which has just ended. The amount of that article, as you will have learned from the Report and tables of Wm. McElroy, Esq., which passed through your locks during the last season, was nearly eighty millions of bushels, or upwards of two hundred and seventy-seven thousand gross tons, of which nearly three millions were destined for the Pittsburgh market alone! What it will be in a few years hence, it would be idle even to conjecture. It is impossible to assign any limit to the ultimate growth of this trade short of the wants of the Mississippi valley, with its teeming myriads of population, the inexhaustible stores of the Monongahela, and the well nigh boundless capability of your work. It is very certain, however, that, great as may be the supply, it will be always outrun by the demand, while it will never perhaps come up to the full measure of the capacity of your Improvement. Your locks, always supplied with a great superabundance of water, and capable of passing without exhaustion, in every fifteen minutes of the day, (as they frequently do) a pair of coal-boats, containing eight hundred tons of coal, (which would load twenty boats and require as many separate lockages on the Pennsylvania Canal,) will be always more than adequate to any demand which is likely to be made upon them; and if found at any future period to be insufficient, may be readily doubled to meet the exigencies of the trade. An amount, however, very far short of what they are at present fitted to accommodate, will be more than sufficient to render your Improvement the most productive and valuable to its owners, of any which has ever been constructed in this or in any other country.

It will be observed, that in the speculations in which I have been indulging in regard to the future prospects of this work, I have confined myself entirely to the article of coal; which, however, is only one of the many sources of revenue

upon which you may safely rely. The Reports of your Collectors show, that besides the large amounts of that article already stated, no less than forty thousand tons additional of freight of other descriptions, and sixty-five thousand and two hundred and fifty-two passengers have been carried upon it during the past year. That these latter items will rapidly increase, as the Improvement, which is yet so comparatively new and obscure, becomes more generally known and advances in popularity with the merchant and the traveller, is perfectly obvious. They are not essential, however, to its support. It can live on the trade which it has itself erected, without borrowing a bale of merchandise, or a single passenger from any other of the great highways of the country. Constructed at a cost (under all its misfortunes) of less than five hundred thousand dollars, about equal to fifteen or twenty miles of our great canals and railroads—and maintained at an expense not exceeding the pay of a mere Board of Canal Commissioners, it can already boast of a tonnage trebling that of the Western Division of the Pennsylvania Canal, and will ere long, unless I am greatly deceived, throw even the Lehigh and Schuylkill Navigation into the shade.

It is worthy of remark, however, while on this subject, that the original design of your Improvement is still unfulfilled, and that a vast treasury of wealth yet remains to be opened, in its extension upwards to the Virginia State line. To accomplish this, you have only to construct some three (or not exceeding four) additional locks and dams, at an aggregate cost, which would not probably exceed one hundred and seventy-five thousand dollars, while it would extend the sphere of your operations, and by opening up a region abounding in iron as well as coal, add largely to the products of your present work. The eminent success of your enterprise, so far as it has been already prosecuted, has awakened a strong desire in the inhabitants of that region, and the country beyond, to participate in the advantages which you have already conferred on their neighbors below; and a movement is now in progress to secure a connection which

will probably result in effecting the object before the condition of your own finances will enable you to undertake it yourselves.

The valley of the Youghiogheny, too, with all its immense mineral deposits, and its enormous strata of bituminous coal, is destined also to become a customer of your Improvement, and to pour its annual tribute into your treasury. A charter has been already obtained by the inhabitants of that valley, to erect a Company for the construction of a slack-water navigation, as far up as Robbstown, on that river, and the expense will be so trifling when compared with the addition which it will assuredly make to the value of the coal-lands along its banks, which are now comparatively worth nothing, that it is not to be doubted that the object will be accomplished in the course of a very few years. Should the resources of the people, however, who are most deeply interested, prove inadequate to the undertaking, I would respectfully suggest that it addresses itself to your own interests with so much force as to entitle it to your active co-operation at the very earliest moment, when your means and credit will enable you to lend it a helping hand.

You want not, however, as I have already remarked, either these or any other auxiliaries to render your works as productive as you could reasonably desire. The country which it already penetrates and traverses for the fifty-six miles between Pittsburgh and Brownsville, is one vast and unbroken coal-field, presenting itself in one continuous and uninterrupted line along the river banks, throughout the whole distance, and containing within its capacious bosom a store of that invaluable fuel, as boundless as the market which it is destined to supply. The trade in this article alone has grown in a single year, from one hundred and sixty-four thousand four hundred and seventy-one to two hundred and seventy-seven thousand eight hundred and eighteen tons, or more than sixty-eight per cent. At the same rate of progression—and the experience of the Lehigh and Schuylkill Navigation, with no better or greater market than this, proves that the

calculation is not extravagant or unreasonable—it will, in less than three years, amount to *one million* of tons (which would be equal to the highest capacity of our best lines of canal), and would yield to the Company, in the shape of tolls, at the present very low rates, and taking half the length of the Improvement as the average distance of transportation, a yearly revenue of about sixty thousand dollars, without taking into the account either merchandise, produce or passengers, from which a large share of your receipts will always be derived, and which have already amounted to the very handsome sum of thirty-three thousand two hundred and eleven dollars, as will be seen by a reference to the returns of the last year.

It is proper to state, however, in connection with this subject, that the rate of toll assessed upon the article of coal, under the very liberal and judicious regulations which you have adopted with a view to the encouragement of the trade, are far short of what you are authorized to impose, and much lower than is exacted on any other improvement of the like description in this country. By the 10th section of the act incorporating your Company, it is provided, that the President and Managers shall be entitled to takê and receive the same rate of toll per ton or otherwise, at their discretion, as the Schuylkill Navigation Company are entitled to receive under their act of incorporation. A comparison of prices, however, will show that on the Monongahela a thousand bushels of coal are charged for the whole distance of fifty-five miles, but two dollars and ninety-one cents, or at the rate of  $8\frac{14}{100}$  cents per ton; while on the Schuylkill, where the charges have been kept down to the lowest point by the powerful rivalry of the Reading Railroad, the toll for the same quantity and distance is eleven dollars and eighty-five cents, or at the rate of thirty-three cents per ton. The same difference, moreover, will be found to prevail upon a comparison with other public works, and if it were necessary, I could refer to at least six of them in this and the adjoining States, whose tables and rates are now before me, and which, although constructed for the



most part by State resources, and designed, of course, rather as works of great public utility, than for purposes of private profit, will show an average charge on the article of coal, of at least treble the amount levied on the Monongahela Navigation.

But I will not weary you with any further speculations on this point. I beg leave, however, respectfully to suggest, for your consideration, whether it would not be advisable to assess the toll on coal, as is invariably done elsewhere, by *weight* instead of *measure*. The former is indeed the only test which can be conveniently applied, and is for that reason in actual use at present upon your Improvement. The result of the measurement of boats engaged in this trade, although given in bushels, is obtained by an estimate of the quantity of water displaced by them. The depth of immersion is graded to a multiplier in bushels and decimals for each superficial foot of surface; and for this purpose I have, in the absence of any legislation on the subject, adopted the conventional weight of eighty pounds as the equivalent of a bushel of coal. The idea of computing the quantity by the slow, and at best uncertain process of measurement, is of course entirely out of the question, even with the assistance of a well regulated standard for the heaped bushel. It is a remarkable fact, however, that although the heaped bushel is in much more general use in this country than any other, the Legislature of this State, in their various regulations on the subject of weights and measures, have never defined its contents. The Winchester bushel of 2,150  $\frac{42}{100}$  cubic inches, has indeed been adopted by them as the standard of dry measure, but so far as regards the dimensions and contents of the cone required to constitute the heaped bushel, there is no fixed rule; and the measure, of course, varies with each measurer, and is believed to be one thing at the mines and on the rivers, and another in our cities. It is, however, understood that the conventional bushel for heaped measure throughout the United States, is 2,688 cubic inches, which will be found to be the contents of the Winchester bushel,

with a cone of  $18\frac{1}{2}$  inches diameter, and 6 inches in height, and to be precisely equal to five pecks of that measure; and it is upon that standard that the assumed weight of eighty pounds is predicated.

Having already extended my remarks in regard to the business, capacity, and prospect of the important work which you have so recently completed, to a much greater length than I had originally intended, I now hasten to conclude with a few additional remarks which have been suggested by the observations of the past year.

Since the last annual report, the lock-house at No. 2, which was then in the course of construction, has been finished, and an additional lot purchased at No. 3, where a permanent dwelling-house has been erected, for the accommodaion of the Collector at that point.

It is also proper to state, that in consequence of some mistake in the location of the lower mitre-sill at Lock No. 1, which was intended to conform in elevation to the bed of the Ohio, but is not sufficiently low for that part of the navigation between the lock and the landing at Pittsburgh, some difficulty has occurred in passing heavily loaded boats in seasons of low water, which however have not been frequent during the past year. The business of this lock, which is at all times large, would seem to require an early application of your means to the removal of this difficulty. To effect this, three several plans have been proposed, as follows: first, to cut out the floor of the lock and lower the mitre-sill in its present location; second, to increase the length of the lock, thereby giving to its chamber a greater capacity, and to construct the new mitre-sill on a lower level, (in either of which cases, however, the depth of the water can only be increased one foot;) and thirdly, to construct a second lock, which may be used exclusively in low water, and will ere long perhaps be necessary to accommodate the rapidly increasing trade when the water is high. The disposition of the boatmen engaged in the coal business, to moor their boats in the pools, for the sake of the harbor which these pools afford,

while they are awaiting a sufficient rise in the Ohio, to enable them to proceed on their voyage with safety, and the consequent accumulation and simultaneous rush for a passage at the critical moment when they can venture out, are productive of occasional delays, which would be certainly obviated by the construction of a new lock. You have the matter under consideration, and I accordingly leave it in your hands.

Should you conclude, however, to dispense with the construction of a new lock, in the present condition of the finances of the Company, there is a means of expediting the coal-boats, and thereby relieving the pressure to which I have just referred, by placing capstans or other machinery on the lock walls, for the purpose of dragging them in and out, without the usual delay. An improvement of this sort is rendered desirable, from the fact that these boats have no motive power, except the current, and are run generally in pairs, containing from four to eight hundred tons, and being therefore sluggish, and in some degree unmanageable, are detained in your locks some fifteen or twenty minutes, while steamboats are usually dispatched in *five*.

I would also suggest for your consideration, the propriety of erecting conspicuous mile index boards, or posts, along your Improvement, for the whole distance, as far as mileage is charged on coal, in order to enable your Collectors to assess the proper toll, which is in some cases a matter of serious difficulty, and calculated to generate disputes between them and the boatmen engaged in the trade. They would cost but a mere trifle, and would well repay the outlay, in the readiness and certainty with which the distances could, in each instance, be then ascertained.

I have only to add, in conclusion, that the management of your work has been conducted during the past year with great energy, prudence and skill, on the part of the several officers appointed for that purpose, and that the promptitude and regularity with which the navigators of the river have been

served by your lock-keepers, have been as satisfactory to the public as they have been advantageous to the Company.

All which is respectfully submitted.

SYLVANUS LOTHROP,  
*Engineer.*

PITTSBURGH, Jan. 4, 1847.

## REPORT OF WILLIAM M'ELLROY, Esq.

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*To the President and Managers of the Monongahela Navigation Company :*

GENTLEMEN—My last annual Report contained a detailed account of the nature of the business on the Monongahela Improvement, and the manner in which it was transacted. This was deemed necessary at the end of the first year's business, in order that such difficulties as had occurred in the system of collection might be obviated by the Board.

It gives me great pleasure to say, that most of the difficulties which seemed to demand a particular statement of facts on that occasion, no longer exist. The business, with but few exceptions, has been more fairly and satisfactorily done; and our system of collection having been more settled and better understood, few difficulties or irregularities occur, except such as are incident to business on all similar improvements, and depend chiefly for a remedy on the vigilance and care of the officers.

I have therefore thought it unnecessary to dwell at length on the incidents connected with the trade of the past year, in this report; reserving for the information of the Committee on Tolls, such facts and observations as may, in connection with the views of the several Collectors, still further tend to make our system more convenient and perfect.

Instead of the weekly abstracts of passenger returns, as published at length last year, I have only given the aggregate returns of the several boats running in the trade. These returns are spread in detail on the register; but as they form a table very difficult to publish, the recapitulation has been deemed sufficient.

The coal statement, exhibiting the precise quantity from each of the several pools, is given in full, as in my last report, being an essential item of information to the Company and the public.

As every paper connected with the collection of tolls comes before me weekly for examination, I deem it due to the several collectors to say, that they have performed their duties with great promptness and efficiency.

The continuance of business having kept all my statements open, up to the last day of the year, has left me no time to remark upon them; but it is hoped they will prove sufficiently explicit, both as regards the trade of the past year, and the very flattering prospects of the Improvement in future. They are, therefore, submitted without further comment.

Respectfully, &c.

WM. M'ELROY, *Inspector, &c.*

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Receipts from Passengers,.....	\$12,680	55
“ Coal,.....	10,221	28
“ Freights, &c.....	20,520	56
	<hr/>	
Total Tolls, year ending Dec. 31, 1846,.....	\$43,422	39

*Receipts at the several Locks.*

Lock No. 1,.....	\$24,609	56
“ No. 2,.....	6,735	11
“ No. 3,.....	3,173	06
“ No. 4,.....	8,904	66
	<hr/>	
Total, as above,.....	\$43,422	39

*Trade of Pool No. 1, both ways.*

	PASSAGES, LOCK No. 1.		
	1845.	1846.	Increase.
Tow Boats,.....	1,490	1,957	467
Flats,.....	4,728	5,711	983

## STATEMENT

*Of Freight shipped both ways on the Monongahela Slack-Water, during the year ending Dec. 31, 1846.*

<i>Shipped Eastward from Pittsburgh.</i>		<i>Arrived Westward at Pittsburgh.</i>	
Molasses, barrrels,	2,111	Lime, bushels,	36,800
Apples, "	85	Potatoes, "	318
Whiskey, "	1,286	Wheat, "	15,161
Salt, "	12,246	Oats, &c., "	50,794
Ale, "	516	Sand, "	197,161
Flour, "	362	Flour, barrels,	51,225
Empty "	4,951	Whiskey, "	4,518
Potatoes, Bushels,	193	Salt, "	2,325
Boards, feet,	2,150,360	Apples, "	13,511
Timber, " lineal,	176,406	Cider, "	363
Pig Iron, tons,	1,117	Empty "	1,193
Shingles, No.	803,650	Iron Ore, tons.	587
H. Poles, "	6,400	Pig Iron, "	903
Lath, "	261,950	Hay, "	205
Staves, "	300	Wood, cords,	108
Brick, fire, "	92,819	Stone, perches,	1,922
Carriages, "	19	W. Glass, boxes,	62,118
Wagons, "	26	Staves, No.	68,250
Ploughs, "	78	H. Poles, "	55,135
Horses, "	61	Brick, "	205,600
Hogs, "	1,588	Lath, "	142,000
Bacon, pounds,	415,375	Carriages, "	33
Tobacco, "	312,250	Wagons, "	86
Butter, &c., "	233,040	Horses, "	118
Other cl. frt. "	9,500,740	Ploughs, "	23
Total pounds Eastward, exclusive of boards & Timber, _____	20,625,353	Hogs, "	423
		Hulls, "	29
		Boards, feet,	359,846
		Timber, " lineal,	111,086
		East. Mdse., lbs.	4,818,474
		Iron, lbs.	1,583,430
		Nails, "	1,479,200
		Other cl. frt., Grain excepted, lbs.	713,868
		Total pounds Westward, exclusive of Boards & Timb., _____	63,012,051

## STATEMENT OF COAL SHIPPED

*In the several Pools of the Monongahela Slack-Water, in 1846.*

## POOL No. 1.

Months.	Flats.	Bushels.	Tolls.	Boats.	Bushels.	Tolls.
Jan.....	90	90,400	\$60 38	.....	.....	.....
Feb.....	116	116,400	78 69	3	1,800	\$16 50
March...	193	193,400	134 40	11	64,100	50 61
April.....	229	229,700	159 12	8	41,000	37 50
May.....	219	216,600	146 10	39	257,300	145 71
June.....	193	196,300	129 15	8	46,400	33 16
July.....	174	163,800	118 49	18	105,775	66 90
August...	195	197,600	138 27	4	30,300	23 39
Sept.....	203	206,800	135 47	.....	.....	.....
Oct.....	200	211,100	137 19	31	190,772	167 68
Nov.....	199	202,400	136 82	33	186,106	131 60
Dec.....	180	182,675	119 09	6	36,500	24 25
	2,191	2,207,475	\$1,493 17	161	960,053	\$697 30

## POOL No. 2.

Months.	Flats.	Bushels.	Tolls.	Boats.	Bushels.	Tolls.
Jan.....	.....	.....	.....	35	201,173	\$166 74
Feb.....	.....	.....	.....	24	115,885	127 21
March...	.....	.....	.....	47	272,385	371 86
April.....	1	1,000	\$1 44	58	345,015	492 55
May.....	.....	.....	.....	69	386,177	487 13
June.....	2	2,000	3 00	2	7,500	11 74
July.....	3	3,000	4 32	54	290,839	439 02
August...	23	25,500	34 88	25	138,484	206 07
Sept.....	20	22,200	33 31	.....	.....	.....
Oct.....	16	17,100	24 77	97	583,908	719 03
Nov.....	4	4,400	7 52	81	499,153	661 06
Dec.....	12	11,800	16 55	28	164,120	212 35
	81	87,000	\$125 79	520	3 004,639	\$3,894 76



**POOL No. 3.**

Months.	Flats.	Bushels.	Tolls.	Boats.	Bushels.	Tolls.
Jan.....						
Feb.....	2	2,000	\$5 06	8	45,548	\$87 60
March ...	2	2,000	5 09	12	74,746	157 38
April.....	18	19,000	42 58	5	22,976	54 04
May.....	16	16,000	33 11	14	74,992	146 74
June.....	20	20,000	36 65			
July.....	26	26,000	52 46	19	93,127	201 22
August..	30	30,000	61 77	2	10,762	25 30
Sept.....	30	30,000	59 25			
Oct.....	32	32,000	63 86	14	77,986	158 32
Nov.....	37	37,000	71 57	15	87,953	174 77
Dec. ....	34	34,000	67 57	5	31,618	75 06
	247	248,000	\$498 97	94	519,708	\$1,080 42

**POOL No. 4.**

Months.	Boats.	Bushels.	Tolls.
January.....			
February.....	8	37,440	\$60 83
March.....	20	97,112	155 91
April.....			
May.....	40	210,279	449 14
June.....			
July.....	20	95,865	227 12
August.....	5	22,900	18 62
September.....			
October.....	30	149,842	239 75
November.....	34	108,589	192 23
December.....	6	30,009	87 26
	163	752,036	\$1,430 86

## RECAPITULATION MONTHLY.

Months.	Pool No. 1.	No. 2.	No. 3.	No. 4.	Total.
January.....	90,400	201,173	.....	.....	291,573
February.....	118,200	115,885	47,548	37,440	319,073
March.....	257,500	272,385	76,746	97,112	703,743
April.....	270,700	346,015	41,976	.....	658,691
May.....	474,200	386,177	90,992	210,279	1,161,648
June.....	242,700	9,500	20,000	.....	342,200
July.....	269,575	293,839	119,127	95,865	778,406
August.....	227,900	163,984	40,762	22,900	455,546
September...	206,800	22,200	30,000	.....	259,000
October.....	401,872	601,008	109,986	149,842	1,262,708
November...	388,506	503,553	124,952	108,589	1,125,601
December....	219,175	175,920	65,618	30,009	490,722
	3,167,528	3,091,639	767,708	752,036	7,778,911

## RECAPITULATION YEARLY.

Pools.	Bus. in Flats.	Bus. in Boats.	Tolls.
No. 1.....	2,207,475	960,053	\$2,190 47
No. 2.....	87,000	3,004,639	4,020 55
No. 3.....	248,000	519,708	1,579 40
No. 4.....	.....	752,036	1,430 86
*	.....	.....	1,000 00
	2,542,475	5,236,436	\$10,221 28

Tons of Coal,.....277,818

\*From Boats paying from Lock to Lock, irrespective of Pools, and not included in the above.

## COMPARISON OF COAL STATISTICS

For 1845 and 1846.

	1845.	1846.	Incr. in 1846.
No. Flats.....	1,964	2,519	555
No. Boats.....	464	938	474
Bushels in Flats.....	1,944,845	2,542,475	597,630
Bushels in Boats.....	2,660,340	5,236,436	2,576,096
Tolls on Flats.....	\$1,469 25	\$2,117 93	\$648 68
Tolls on Boats.....	3,814 54	8,103 35	4,288 81

*Passenger Returns of the several Boats running in the Monongahela Slack-water in 1846.*

BOATS.	No. Weekly Returns.	PASSENGERS.		No. Locks.	TOLLS.
		Through.	Way.		
Consul.....	45	15,510	8,892	18,263	\$5,155 91
Louis M' Lane.....	46	16,587	10,208	19,543	5,514 76
Medium.....	14	1,825	1,562	3,060	670 45
Arena.....	11	857½	2,040	3,294	444 96
Motive.....	11		863	1,287	89 46
Franklin.....	11		1,068	2,323	162 61
Rambler.....	28		3 005	4,121	288 47
Dispatch.....	28		1,076	1,809	126 63
Miner.....	13		424	751	52 57
Resort.....	8		919	1,356	94 92
Transient Boats.....	11	205	211	408	79 81
Total.....	226	34,984½	30,268	56,206	\$12,680 55

*Passenger Business in 1845 and '46, compared.*

	1845.	1846.	Inc. in 1846.
Through Passengers... ..	22,726½	34,984½	12,258
Way Passengers.....	20,675	30,268	9,593
Total.....	43,401½	65,252½	21,851
Toll on Thro' Passengers...	\$5,681 62	\$8,746 13	\$3,064 51
Toll on Way Passengers...	2,440 41	3,934 42	1,494 01
Total.....	\$8,122 03	\$12,680 55	\$4,558 52

**MOORHEAD, ROBERTSON & CO.**

*In account with the Monongahela Navigation Company, for  
Receipts and Disbursements for said Company, for the  
year 1846.*

**R E C E I P T S .**

Balance brought from the year 1845,	\$211 11
Tolls at Lock No. 1, for quarter ending March 31st,.....	\$3,297 25
Tolls at Lock No. 2, do. do.	1,352 75
Do. 3, do. do.	520 60
Do. 4, do. do.	2,042 56
Cash received for materials sold,.....	473 70
Total receipts 1st quarter,.....	7,636 86
Tolls at Lock No. 1, for quarter ending June 30th,.....	8,034 45
Tolls at Lock No. 2, do. do.	1,663 22
Do. 3, do. do.	729 87
Do. 4, do. do.	2,949 21
Cash rec'd for materials sold, and for rent, 38 17	
Total receipts 2d quarter,.....	13,414 92
Tolls at Lock No. 1, for quarter ending Sept. 30th,.....	6,136 04
Tolls at Lock No. 2, do. do.	1,349 80
Do. 3, do. do.	766 47
Do. 4, do. do.	1,362 17
Total receipts 3d quarter,.....	9,614 48
Tolls at Lock No. 1, for quarter ending Dec. 31st,.....	7,141 82
Tolls at Lock No. 2, do. do.	2,369 34
Do. 3, do. do.	1,156 12
Do. 4, do. do.	2,550 72
Total receipts 4th quarter,.....	13,218 00
Total receipts for the year 1846,.....	\$44,095 37
Balance due Moorhead, Robertson & Co.,.....	1,527 67
	\$45,623 04

## DISBURSEMENTS.

Repairs for quarter ending	March 31,	\$157 51	
Do. do.	June 30,	896 24	
Do. do.	Dec. 31,	6,716 93	
Total repairs for the year 1846,			\$7,770 68
Expenses for quarter ending	March 31,	2,739 78	
Do. do.	June 30,	1,791 40	
Do. do.	Sept. 30,	1,349 32	
Do. do.	Dec. 31,	2,146 73	
Total expenses for the year 1846,			8,027 23
Interest for quarter ending	March 31,	7,045 59	
Do. do.	June 30,	884 28	
Do. do.	Sept. 30,	61 87	
Do. do.	Dec. 31,	7,442 57	
Total interest for the year 1846,			15,434 31
Old debt, amt. pd. in qr. end.	Mar. 31,	923 63	
Do. do.	June 30,	7,241 78	
Do. do.	Sep. 30,	447 69	
Do. do.	Dec. 31,	2,424 75	
Total am't. of debt paid for year '46,			11,037 85
Construction paid for Lot for Lock			
house at No. 2, .....		400 00	
Do. do. do. No. 3,		300 00	
Do. on acct. build. Lk. houses 2 and 3,		1,652 97	
Total for constr. for the year 1846,			2,352 97
Damages paid during the year '46, .....			1,000 00
			<u>\$45,623 04</u>

I hereby certify that the foregoing account of Moorhead, Robertson & Co. is correct, and agrees with the quarterly statements and vouchers, duly audited and approved by the appropriate committee of the Board of Managers, agreeably to the terms of the mortgage.

THOMAS M. HOWE,

Jan. 1st, 1847.

Treas'r Mon. Nav. Co.

STATEMENT OF THE AFFAIRS OF THE  
**MONONGAHELA NAVIGATION COMPANY,**

December 31st, 1846.

<p>Construction,.....\$490,820 95</p> <p>Damages,..... 6,851 91</p> <p style="text-align: right;">—————\$497,672 86</p> <p>Stock Monongahela Navigation Co., 400 00</p> <p>Bills Receivable, ..... 50 00</p> <p>Cash,..... 658 00</p> <p style="text-align: right;">—————</p> <p style="text-align: right;"><b>\$498,780 86</b></p>	<p>Capital Stock,.....\$260,600 00</p> <p>Loss, due by delinquent            stockholders,..... 14,028 11</p> <p style="text-align: right;">—————\$246,571 89</p> <p>Bonds issued,..... 231,500 00</p> <p>Outstanding Warrants, 6,667 15</p> <p>Bills Payable,.. ..... 5,800 00</p> <p style="text-align: right;">————— 243,967 15</p> <p>Moorhead, Robertson &amp; Co.. ..... 1,527 67</p> <p>Profit and Loss,..... 6,714 15</p> <p style="text-align: right;">—————</p> <p style="text-align: right;"><b>\$498,780 86</b></p>
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ATTEST—  
**THOMAS M. HOWE, Treas'r.**

## RATES OF TOLL

To be charged on the Monongahela Slack Water,

ON AND AFTER FEBRUARY 1, 1847.

**Class No. 1.—Forty Cents per 1,000 pounds.**

Copper of all kinds,	Merchandise not specified,
Confectionery,	Marble, manufactured,
Drugs and Medicines,	Oils, Paints and Dye-Stuffs,
Furniture,	Oysters,
Feathers,	Paper of all kinds,
Fruits, not specified,	Queensware and Chinaware,
Furs, Peltry and Skins,	Ropes and Cordage,
Glassware,	Spices,
Hides, dry,	Steel,
Hardware and Cutlery,	Steam Engines & Machinery,
Leather, dress'd & undress'd,	Tin and Tinware,
Lead, white, red & Litharge,	Tobacco, manufactured,
Liquors, foreign,	Wool.

*Way Freight, 11 Cents per 1,000 pounds, per Lock.***Class No. 2.—Thirty Cents per 1,000 pounds.**

Agricultural Products not specified,	Groceries not specified,
Agricultural Implements, do.,	Glauber Salts,
Ale, Beer and Porter,	Ginseng,
Anvils,	Hemp, Oakum and Flax,
Blooms,	Hides, Green and Salted,
Butter, Bacon and Beef,	Iron, Rolled and Hammered,
Chair Stuff, turned,	Lard and Tallow,
Copperas,	Molasses,
Coffee,	Marble, sawed or in blocks,
Cheese,	Nails and Spikes,
Cotton and Cotton Yarns,	Old Cordage,
Castings,	Pork,
Dried Apples and Peaches,	Powder,
Doors and Blinds for Steam Boats, &c.,	Pitch, Tar, Rosin and Turpentine,
Earthen and Stone Ware,	Rags,
Fish,	Saleratus,
Flax and other Seeds.	Saltpetre,
	Tobacco Leaf.

*Way Freight 8 Cents per 1,000 pounds, per Lock.*



**Class No. 3.—Twenty Cents per 1,000 pounds.**

Ashes, Pot, Pearl, Scorplings,	Lead, in Pigs and Bars,
Cut Stone,	Plaster, Paris,
Grind & Mill Stones and Bur	Scraps and Broken Castings,
Blocks,	Spanish Whiting and Barytes,
German Clay and Gypsum,	Wheat and other Grain.
Hydraulic Cement,	White or Louisville Lime.

*Way Freight, 6 Cents per 1,000 pounds, per Lock.*

**On all articles not above enumerated, Thirty Cents per 1,000 pounds.**

**Steam Boats, Keels, Flats and Flat Boats.**

	Thro'.	Pr. Lk
In addition to Toll on Cargo, .....	1 50	50

No Boat shall be charged more than \$1 50 per day, or \$1 00 for a single Trip t or from Monongahela City.

**MISCELLANEOUS.**

	Thro.	PrLk.
Apples,.....per bbl.	3	$\frac{1}{4}$
Flour,.....per bbl.	5	1 $\frac{1}{2}$
Whiskey,.....per bbl.	8	2
Molasses,.....per bbl.	15	4
Salt (Nominal),.....per bbl.	5	1 $\frac{1}{2}$
Cider, Beer, Ale and Porter,.....per bbl.	6	1 $\frac{1}{2}$
Empty Molasses and Whiskey barrels..... each,	2	$\frac{1}{2}$
Empty Flour, Apple and Salt barrels,..... each,	1	$\frac{1}{2}$
Window Glass, .....per box,	2 $\frac{1}{2}$	$\frac{1}{4}$
Lime,.....per bush.	1	$\frac{1}{2}$
Potatoes and Turnips,.....per bush.	1	$\frac{1}{2}$
Manure,.....per 1,000 lbs.	8	2
Rough Stone and Limestone,.....per perch,	12	3
Iron Ore,.....per ton,	16	4
Pig Iron, descending,.....per ton,	45	12
Pig Iron, ascending,.....per ton,	33	9
Hay and Straw, .....per ton,	40	11
Fire Wood,.....per cord,	25	7
Bark,.....per cord,	40	11
Posts and Rails, .....per 100 count,	25	7
Brick (Fire),.....per 100 count,	8	2 $\frac{1}{2}$
Brick (Common),.....per 100 count,	4	1 $\frac{1}{2}$
Stave, Headings, for pipes and hhds., per 100 count,	8	2
Staves and Headings, barrels,.....per 100 count,	4	1

	Thro.	PrLk
Hoop-poles, hogsheads,.....per 100 count,	5	1½
Hoop-poles, barrels,.....per 100 count,	3	1
Shingles.....per 1,000 count,	10	3
Lath,.....per 1,000 count,	8	2
Timber in Rafts,.....per 100 ft.	20	6
Boards, Scantling, and other Sawed		
Lumber, ascending, board measure, per 1,000 feet,	30	8
Do descending,.....per 1,000 feet,	20	5
Carriages and large Wagons,.....each,	50	12½
Buggies, small Wagons, Carts, &c.....each,	25	6½
Horses and Horned Cattle,.....each,	25	7
Hogs, Sheep and Calves,.....each,	6	1½
PASSENGERS,.....each,	25	7

All Passengers and Freights carried in any boat, on the Pools, to and from points between Locks, shall pay the same toll as if taken through ONE LOCK, to be returned and paid as other Way-Passengers and Freights. Also, all Freight and Passengers taken on board or landed at any Lock, shall be charged for that Lock.

#### Hulls of Steamers exclusive of Cargo.

	THROUGH.	PER LOCK.
MEASUREMENT:— 50 tons or under,.....	8 00	-2 50
Do. 50 to 100 tons,.....	12 00	3 50
Do. 100 to 200 tons,.....	15 00	5 00
Do. 200 to 300 tons,.....	25 00	7 00
Do. 300 tons and upwards,	35 00	10 00

#### Coal, Coke and Sand.

	Dist Co.	PrMo.	Lock No.	Lockage.
Each 1,000 bushels, Pool No. 4,	16	0	Lock No. 4	20
Do. do. Pool No. 3,	15	3	Lock No. 3	30
Do. do. Pool No. 2,	14	4	Lock No. 2	40
Do. do. Pool No. 1,	10	5	Lock No. 1	50

No additional toll to be charged on Boats laden with Coal, Coke, Lime, or Sand, descending, or on Tow Boats having in tow Coal Flats without Freight or passengers. But no boat so laden shall pay less than 50 cents per lock.

On all articles descending the Monongahela and Youghiogheny rivers, from any point more than five miles above the influence of the Slack-water, in Flats and Flat-boats, not intended to return, the Collector who clears the same, shall, upon satisfactory evidence thereof, allow and make a reduction of fifty per cent. from the above rates.

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In the collection of Tolls, all articles to be charged at their exact weight, but when not weighed, the annexed articles are to be computed as follows:

Beef and Pork, Salted;		Corn, Rye and Seeds,	
Rosin, Oil of all kinds, ... pr. bbl.	200 lbs.	of all kinds,.....pr. bushel,	56 lbs.
Fish, Salted,.....pr. bbl.	300 lbs.	Oats,.....pr. bushel,	30 lbs.
Tar (28 gall.),.....pr. bbl.	320 lbs.	Wheat,.....pr bushel,	60 lbs.
Barley and Buckwheat, .. pr. bus.	45 lbs.	Oysters (Shell),.....pr. bushel,	75 lbs.

## RULES AND REGULATIONS.

I. All Masters of Steam Boats, Keel Boats, Barges, or Flat Boats, laden with produce, &c., shall present to the Collector at the first lock a Manifest of Cargo, so arranged as to enable him readily to calculate the tolls, containing—

*First.* The name of each place on the river where any portion of such property was shipped, and of the place for which it is intended to be cleared.

*Second.* A statement exhibiting the number of boxes bales, barrels, casks, and various packages of which the cargo consists; the weight of all articles of property on which toll is charged by the ton, or one thousand pounds; the number of articles on which toll is charged by the number; the feet of each article on which toll is charged by the foot; and the brand and number of boxes in each separate lot of window glass.

*Third.* A specification of the weight or quantity of each article, where a different rate of toll is charged on different articles, on which toll is so computed. And in case of the neglect or refusal of any master or owner to comply with the second and third articles of this regulation, the whole cargo shall be charged with tolls at the rate of those articles on board paying the highest rate of toll.

II. The tolls shall be paid at the first lock passed by a boat; and upon payment thereof, the master of the boat shall receive a clearance, on which shall be noted the weight of the different articles, the different classes to which they belong, and the total amount of tolls paid.

III. The clearance shall be exhibited to the Keeper of each lock before passing the same, and shall, together with a full and corrected manifest of the cargo, be given up to the Collector at the last lock, if ascending; but in all cases—

the manifest descending shall be delivered to the Inspector at Pittsburgh.

IV. All way freight received shall be reported to the Collector at the first lock after it is taken on board, and upon the tolls being paid upon it, the Collector shall enter it upon the clearance.

V. In order to guard against frauds, the Collectors or Inspectors are authorized to overhaul the cargo, if they shall see cause to suspect the correctness of the manifest; and if the Master or Clerk of any boat shall make a false or fraudulent return, by placing articles in a lower class than that to which they belong, or returning a less weight than he has on board, he shall pay triple toll for the entire cargo on board at the time.

VI. A preference shall be given in passing locks to regular mail and passenger boats.

VII. Every Clerk of a steamboat making *regular trips* and carrying passengers, shall once per week, or as often as required, deliver to the Collector at Lock No. 1, a statement of all passengers conveyed on such boat, and pay the tolls thereon. Said statement, when required by the Collector, to be verified under oath or affirmation before an Alderman or Justice of the Peace.

VIII. All owners and masters of tow-boats will be held accountable for the tolls on all boats which they may have in tow, and payment must be made in all cases before passing the first lock, and any tow boat taking a loaded keel boat into Lock No. 1, without a manifest and classification from the Inspector at Pittsburgh, shall be subject to a penalty of ten dollars.

IX. Each Collector shall report to the Board of Managers the name and Master of each boat, the cargo of which he has discovered to have been cleared for less than it actually contains, under circumstances giving rise to suspicion that a fraud upon the revenue of the Company was intended.

X. Every steamboat or other float passing on the Mon-

ongahela Navigation, shall, at all times during the night, carry a conspicuous light on the bow or forward end of the same; and for a non-compliance with this provision, the owner or Master of such boat or other float shall be subject to a penalty of five dollars.

XI. No boat or other float shall load or unload, or unnecessarily stop, lie by or detain in any lock, or within two hundred yards of any lock; nor more than two boats abreast for a distance of three hundred yards further above any lock, without permission of the Lock Keeper, under a penalty of FIFTY DOLLARS.

XII. No boat shall be permitted to come within two hundred yards of the lock, until the lock is ready; and the boats shall be passed through in the order in which they arrive at the locks, with the exception of mail and passenger boats, which shall have the preference.

XIII. Masters and Owners of boats shall, in all cases, be accountable for any damages done by such boats to the locks, gates or machinery connected therewith.

XIV. The Master of every boat intending to pass a lock, shall, upon arriving within one-fourth of a mile of the same, ring a bell or blow a horn to give notice of his approach; the neglect of this provision shall subject him to a penalty of five dollars.

XV. All penalties for violating the above Regulations, shall be recoverable before an Alderman or Justice of the Peace, as debts of like amount are now recoverable by law.

J. K. MOORHEAD, *Pres't.*

WM. BAKEWELL, *Sec'ry.*

PITTSBURGH, *January 4, 1847.*

At a meeting of the Stockholders of the Monongahela Navigation Company, held this day, the following gentlemen were elected Officers and Managers for the year 1847 :

PRESIDENT—J. K. MOORHEAD.

TREASURER—THOS. M. HOWE.

MANAGERS.

JOHN ANDERSON,	JOHN L. DAWSON,
THOMAS BAKEWELL,	WILLIAM EICHBAUM,
JAS. W. BURBRIDGE,	S. R. JOHNSTON,
GEO. W. CASS,	JOHN TASSEY,
NEVILLE B. CRAIG,	R. C. TOWNSEND.

SECRETARY—WM. BAKEWELL.

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COMMITTEES FOR THE YEAR 1847.

ON CLAIMS AND ACCOUNTS.

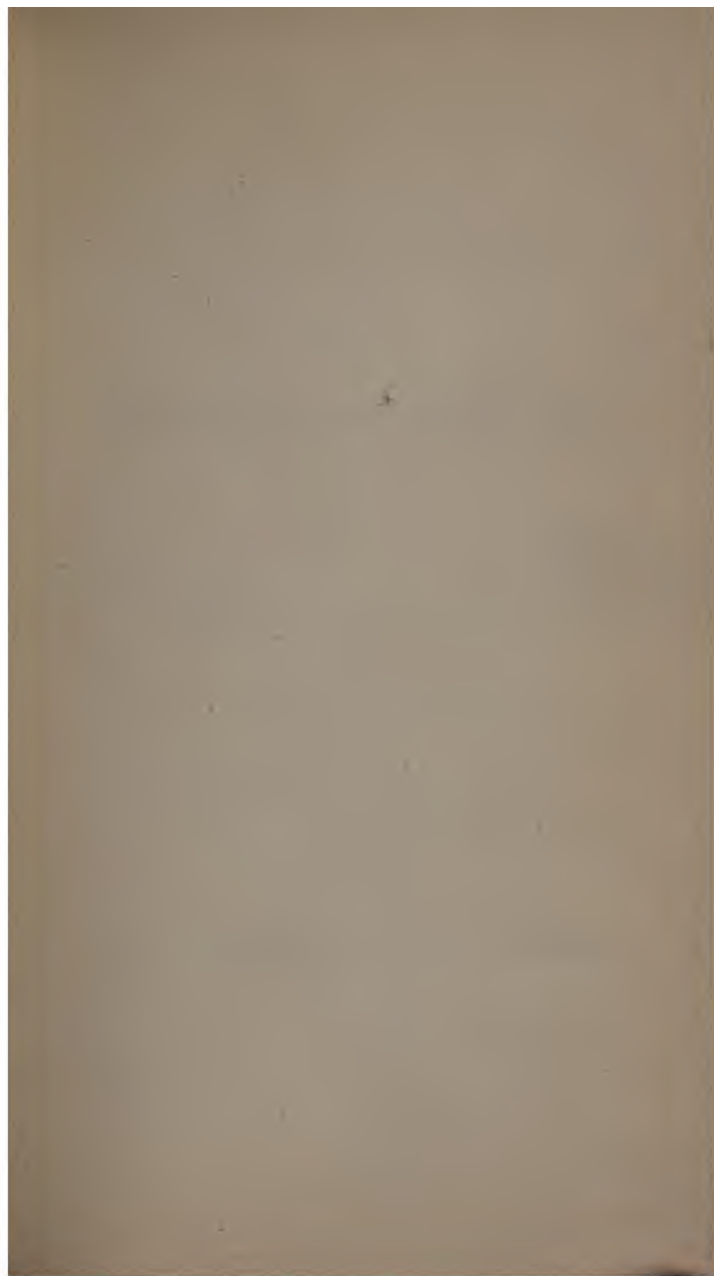
J. W. BURBRIDGE,	JOHN TASSEY,
WM. EICHBAUM,	JOHN L. DAWSON.

ON REPAIRS.

JOHN ANDERSON,	N. B. CRAIG,
R. C. TOWNSEND,	GEO. W. CASS.

ON TOLLS.

THOMAS BAKEWELL,	JOHN ANDERSON,
S. R. JOHNSTON,	N. B. CRAIG.







EIGHTH  
ANNUAL REPORT,  
OF THE  
PRESIDENT AND MANAGERS,  
TO THE  
MONONGAHELA NAVIGATION  
COMPANY;

**Presented January, 1848,**

WITH THE  
ACCOMPANYING DOCUMENTS.

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PITTSBURGH:

PRINTED BY JOHNSTON & STOCKTON, CORNER OF MARKET & THIRD-STES.

1848.

## OFFICERS.

~~~~~  
PRESIDENT—J. K. MOORHEAD.

TREASURER—THOMAS M. HOWE.

### MANAGERS.

|                     |                   |
|---------------------|-------------------|
| JOHN ANDERSON,      | JOHN L. DAWSON,   |
| THOMAS BAKEWELL,    | WILLIAM EICHBAUM, |
| JAMES W. BURBRIDGE, | S. R. JOHNSTON,   |
| GEORGE W. CASS,     | JOHN TASSEY,      |
| NEVILLE B. CRAIG,   | B. C. TOWNSEND.   |

SECRETARY—WM. BAKEWELL.

TO THE STOCKHOLDERS  
OF THE  
MONONGAHELA NAVIGATION COMPANY.

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HAVING, in the last Annual Report, given a detailed history of the operations of the Board, from its organization to that period, all that is necessary now, is to present a statement of the business of the past year, and the prospects for the future.

Owing to the mildness of the last winter, the navigation met with little or no interruption from ice, and tolls have been collected every day in the year, up to the 26th inst.

In the last Annual Report, the importance of extending the work to the Virginia State line was urged; and it was also suggested that application had been made to the Legislature of Virginia for a Charter, authorizing a Company to make a steamboat navigation to Clarksburg, a distance of one hundred miles or more from the State line. That application, as was anticipated, was successful, and the State made her usual subscription of two-fifths of the amount necessary to construct the work, which is delayed now for the purpose of obtaining some modification in the Charter. This renders it more important that arrangements be made at once to extend our work to the State line, which we find impossible, under the present embarrassed condition of our finances.

|                                                                                                                                                    |              |
|----------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| Our improvement, making a complete navigation from<br>Pittsburgh to Brownsville, of 56 miles—cost for con-<br>struction, engineering, damages, &c. | \$517,225 21 |
| Whilst the total amount of capital stock sub-<br>scribed and paid in, is . . . . .                                                                 | 247,179 90   |

Leaving a balance to be paid out of the tolls, \$270,045 31  
For this balance, warrants and bonds have been issued,  
and the interest is paid out of the proceeds of the work.  
As a large portion of the net revenue is therefore absorbed  
in paying interest, it will require many years to liqui-  
date the bonds; and until that is accomplished, the Stock-  
holder will receive no returns in the shape of dividends.  
Under these circumstances it cannot be expected that  
new stock can be obtained to extend the work, whilst such  
new subscriptions would be saddled with their just pro-  
portion of the present debt.

The Board therefore contemplate asking the Legisla-  
ture to authorize the subscription of stock for the purpose  
of said extension, under such restrictions, that said sub-  
scription shall be entitled to receive in dividends the  
amount of revenue arising from said extension, until the  
entire debt due on the work below Brownsville is paid;  
after which, dividends shall be made equally upon the  
whole stock of the Company. Whilst this arrangement  
would hold out inducements to the new Stockholders, it  
would also hasten the period when the present debt would  
be liquidated, as it would greatly increase the business.

It is presumed, from the great public convenience af-  
forded by the improvement so far as completed, and the  
urgent demands of the citizens above for its extension,  
that the Legislature will afford such facilities as will en-  
able us to complete the work. Should the work in the  
state of Virginia be prosecuted with vigor, simultaneously  
with our own extension, we would soon have a continuous  
slack-water extending a distance of nearly 200 miles from

Pittsburgh, through an exceedingly rich and fertile country, which at present has no other outlet to market than that afforded by the precarious navigation of the Monongahela river during freshets. The Monongahela navigation, during the present season, has proved to be a valuable feeder to the State canals. Of the eighty thousand barrels of flour that came through it, more than nine-tenths were shipped eastward by the Pennsylvania canal, and so of other items. If such is the result at present, the amount of tonnage that would be thrown upon our State works, when the contemplated extension is completed, can scarcely be conceived.

Although the prospect to the Stockholder, who contributed his money many years since, appears to be gloomy, and the period when he will receive dividends upon his investment very distant, owing to the fact that the stock represents less than one-half the cost of the work, and the balance is being paid out of the revenues arising out of the work; yet as the public are mainly indebted to the original subscriber for the construction of this magnificent improvement, as he was first to step forward and furnish the means for its commencement, although he will be last to receive any return, yet it is confidently believed that when the upper division is finished, the prospects of the Stockholders in the lower division will be much improved. And it is also expected, that if subscriptions of stock cannot be obtained, to enable the Board to cancel the outstanding indebtedness of the Company, that at least such arrangement will be made, as to enable the Board to increase the capital stock to the amount of the cost of the work, and the Stockholders to receive the earnings of their former subscriptions, in the shape of dividends of the increased stock.

The business of the past season, shows a regular and gradual increase over the preceding year, and particularly on coal, glass, and agricultural productions, being the staple articles of the valley, and giving evidence that the lo-

cal trade will eventually be sufficient to pay interest on the entire cost of the work.

It is gratifying to be able to state, that whilst high water and freshets, during the last season, were inundating and destroying the public works of this and the adjoining States, the Monongahela Improvement received little or no damage, and has been in good navigable condition during the entire season.

In the last Annual Report it was suggested that the increase of trade would require additional facilities at Dam No. 1. It was, after full consultation, agreed upon by the Board, to construct an entire new Lock, of increased dimensions; and as the Board had not the control of funds necessary for the purpose, they received proposals for the construction of the work, to be paid for in the Bonds of the Company, payable eight years after date. Messrs. Alstons & Hannay being the lowest bidders, the contract was allotted to them for the gross sum of forty-two thousand dollars. They commenced the work, but owing to a succession of freshets, did not make as much progress as was desirable. They will, however, if we have an ordinary season of low water, be enabled to complete the job next season.

The gross amount of tolls collected during the year 1847, is \$54,261 90, being an increase over that of last year of \$10,839 51, or 25 per cent. It is a matter of gratulation that the old and floating debt against the Company, with the exception of \$4,000 due to the Pittsburgh Bank, has been paid off; and notwithstanding the payment during the year of \$2,834 27 to Adam Coon & Son for damages, and \$1,000 to Gen. Watson for a lot of ground at Lock No. 3, (which were not anticipated in last Report,) together with expenses, repairs and interest, (for details of which see Treasurer's Report,) yet the liquidation of the Bonds issued for the completion of the work has commenced, and the cancellation of \$13,500 of said Bonds has been provided for. Should no unforeseen dis-

aster occur, there will be at least \$30,000 of them cancelled during the ensuing year. As the cancellation of these Bonds will relieve the Board from the payment of interest, the amount applicable to the liquidation of principal will be thereby annually increased.

The repairs for the year have amounted to \$2,141 49, part of which has been expended in putting new gates in Lock No. 1, as the old ones had become decayed and unsafe. The navigation is now in good order, and it is believed that the amount required for repairs next year, will not exceed the sum expended during the present year.

Respectfully submitted,

J. K. MOORHEAD,

PITTSBURGH, Jan. 1848.

*President.*



# REPORT

OF

## SYLVANUS LOTHROP, ESQ.

---

*To the President and Managers of the Monongahela Navigation Company:*

GENTLEMEN—Agreeably to your instructions, I have the honor to present the following Report in relation to the past year's operations, and present condition of your Improvement upon the Monongahela river.

The permanent and substantial character of your Locks and Dams, and the very trifling repairs which are necessarily required for their preservation, have left me but little to perform, either in the way of labor or superintendence, in my capacity as your Engineer. It affords me great satisfaction, however, in this my Fourth Annual Report, to be enabled to refer again, and with additional emphasis, to the results of your own experience, in confirmation of all that has been already suggested in regard to the prospective value of your Improvement, and its capability of resisting the usual casualties to which such works are exposed. The history of the past year has demonstrated even more fully than before, its entire sufficiency to withstand the vicissitudes of the seasons, with all their alternations alike of frost and flood. The freshets of that year, although distinguished by their height and frequency, above those which had gone before them, so far as to have

proved destructive of other valuable improvements in our own State, which have been literally torn up and destroyed by their ravages, have left no trace of their devastating power upon yours, and have not even been productive of any delay in the regular course of the navigation thereupon. The only injury which your company has sustained from that source, was the loss of a trifling amount of toll on the trade which was floated over your Locks and Dams while they were temporarily drowned beneath the waters which they had no longer the power to confine.

During no similar period since the opening of your Improvement, has it enjoyed so high a degree of prosperity, or been the means of rendering so large an amount of service, not only to the trading and traveling public, as an avenue of communication between the East and West, but also to the city of Pittsburgh, and the rich agricultural, mining and manufacturing district which it penetrates and traverses for its whole distance.

This Improvement has now been open for public use, and in actual business operation for a period of more than three years; and the fact is worthy of remark, and perhaps without a parallel in the history of other public works of a similar description, that during all this interval not a single trip has been lost, or any delay occurred in the regular transit of boats and other craft, from the failure of any part of the works or fixtures connected therewith; while at the same time the expenditure of the company's funds, in the shape of repairs, has been very light and inconsiderable, when compared with the importance of the navigation and the vast amount of business which has been done upon it, as will be readily seen by reference to the accompanying Reports.

The rapidly augmenting trade of the Monongahela, which may be safely estimated at an increase of ten-fold since the construction of this Improvement, in connection with a slight error or oversight in the location of the lower mitre sill at Lock No. 1, and the consequent inadequacy

of that Lock to accommodate the low-water navigation, rendered some alteration imperatively necessary at that point. A conviction of that necessity induced the Board to undertake the construction of a new and additional Lock; and accordingly, after receiving and examining proposals for that purpose, the work was allotted to Messrs. Alstons & Hannay, who entered into articles of agreement with the company, under specific prices for each separate item of work required to be done thereupon, which, according to the most accurate estimates that could then be made, will amount to about 42,000 dollars. This work, by the terms of the contract, is to be completed on or before the first day of October, 1848. The chamber of the Lock will be 56 feet in width and 250 feet in length, between the gates, and will be of larger dimensions than any other now in use in this country. The lower mitre sill will be laid two feet below the level of that in the present Lock, and is designed to obviate entirely the existing difficulties of the navigation in periods of low water.

The parties undertaking to perform this work, commenced their operations under the contract just referred to, early in the spring, and were exceedingly fortunate in procuring a most valuable quarry at the village of West Elizabeth, on the slack water improvement, where a large portion of the stone required for the construction of this capacious Lock, have been already taken out, cut and delivered on the bank of the river. The work of construction, however, owing to the unfavorable season, the difficulties arising from the close proximity of the present Lock, and the indispensable necessity of keeping the navigation open for the accommodation of the trade, in connection with the early floods of September, and the continued high water after that period, has not progressed with that degree of rapidity which the contractors themselves contemplated, and the Board so anxiously desired. It has however, notwithstanding all these discouragements,

been steadily advancing. The coffer dam has been constructed, and the water power ingeniously applied to the operation of pumping and grinding the cement. The earth and rock excavation below the guard-wall has been nearly completed, and a large portion of the shore wall has been raised to an elevation of five feet above the foundation; while at the same time the contractors are well supplied with boats for the conveyance of the stone, and all the necessary apparatus for a vigorous prosecution of the work, whenever the condition of the river and the weather will permit. In order however to accomplish this undertaking within the time specified in the contract, or even during the next approaching autumn, will require an application of the utmost exertion of the parties interested in this undertaking.

It is proper to remark, in connection with this topic, that a new and superior set of mitre gates for Lock No. 1, has been prepared under the direction of the Board, and are now about being fitted and hung for the operations of the navigation at that point.

I think I may now be permitted to say, and I trust I shall be excused for repeating, that your work has passed through an ordeal which furnishes the most undoubted assurance of its stability. Although your Locks and Dams enjoy no superior advantages in point of location, and not even based upon a rock foundation, except in the single instance of Lock No. 1, the experience of each successive year adds further, and if possible, more conclusive proof of their perfect security. The immense weight of the structures themselves, is a sufficient guaranty against the possibility of removal, while the risk of having their foundations sapped by the action of the waters, the only serious hazard indeed to which you have at any time been exposed, has been obviated and counteracted in such a way, by frequent and minute inspection of the currents and their effects, and by fortifying from time to time the seve-

ral points which were found to be weakest and most exposed, as to have greatly strengthened the work itself.

The dams themselves, from the fact of being so generally submerged, are not liable to decay. While the abutments, which may be considered the most vulnerable points in times of high water, from their exposed situation and immediate connection with the banks, will be the first to require repairs. The increasing prosperity of the navigation, however, will enable you, in the course of a very few years, to reconstruct them of more substantial and durable materials, and in such a manner as to render that portion of the work far more secure, and permanently safe for all time to come.

The very low and liberal tariff of tolls which was established at an early period by the wisdom and foresight of your Board, for the purpose of encouraging the trade, has already fully indicated the sagacity of those who framed it, by having become one of the most important and efficient instruments of your success; while the skilful and energetic management of your Locks, and the prompt despatch of all boats seeking a passage, has redounded as much to the advantage of the stockholders, as they have contributed to secure to your work a degree of popular favor which will soon furnish ample indemnity for the odium to which it was so unjustly subjected in its infancy, and while its fortunes were overshadowed by the embarrassments of its earlier years.

All which is respectfully submitted.

SYLVANUS LOTHROP,

PITTSBURGH, Jan. 3d, 1848.

*Engineer.*

## STATISTICS

OF THE TRADE, FOR THE YEAR 1847.

|                                              |   |   |             |
|----------------------------------------------|---|---|-------------|
| Receipts from Passengers,                    | - | - | \$16,674 25 |
| “ Coal,                                      | - | - | 13,241 94   |
| “ Freights, &c.                              | - | - | 24,345 71   |
| Tot. Tolls, year ending Dec. 31, 1847, ————— |   |   | \$54,261 90 |

*Receipts at the several Locks.*

|                        |   |   |             |
|------------------------|---|---|-------------|
| Lock No. 1,            | - | - | \$30,582 30 |
| “ No. 2,               | - | - | 8,307 05    |
| “ No. 3,               | - | - | 3,759 72    |
| “ No. 4,               | - | - | 11,612 83   |
| Total, as above, ————— |   |   | \$54,261 90 |

*Trade of Pool No. 1, both ways.*

|            | 1846. | 1847. | Incr. in 1847. |
|------------|-------|-------|----------------|
| Tow Boats, | 1,957 | 2,152 | 195            |
| Flats,     | 5,711 | 5,931 | 220            |

*Keel Boat arrivals at Pittsburgh.*

|                     |   |   |      |
|---------------------|---|---|------|
| Youghiogheny Keels, | - | - | 80   |
| Monongahela do.     | - | - | 25   |
| Total,              |   |   | —105 |

cal trade will eventually be sufficient to pay interest on the entire cost of the work.

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Respectfully submitted,

J. K. MOORHEAD,

PITTSBURGH, Jan. 1848.

*President.*



R E P O R T  
OF  
SYLVANUS LOTHROP, ESQ.

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All which is respectfully submitted.

SYLVANUS LOTHROP,

PITTSBURGH, Jan. 3d, 1848.

*Engineer.*

## STATISTICS

OF THE TRADE, FOR THE YEAR 1847.

|                                            |          |    |
|--------------------------------------------|----------|----|
| Receipts from Passengers, -                | \$16,674 | 25 |
| “ Coal, - - -                              | 13,241   | 94 |
| “ Freights, &c. -                          | 24,345   | 71 |
| Tot. Tolls, year ending Dec. 31, 1847, ——— | \$54,261 | 90 |

*Receipts at the several Locks.*

|                        |          |             |
|------------------------|----------|-------------|
| Lock No. 1, - - -      | \$30,582 | 30          |
| “ No. 2, - - -         | 8,307    | 05          |
| “ No. 3, - - -         | 3,759    | 72          |
| “ No. 4, - - -         | 11,612   | 83          |
| Total, as above, - - - | ———      | \$54,261 90 |

*Trade of Pool No. 1, both ways.*

|                  | 1846. | 1847. | Incr. in 1847. |
|------------------|-------|-------|----------------|
| Tow Boats, - - - | 1,957 | 2,152 | 195            |
| Flats, - - -     | 5,711 | 5,931 | 220            |

*Keel Boat arrivals at Pittsburgh.*

|                           |      |
|---------------------------|------|
| Youghiogheny Keels, - - - | 80   |
| Monongahela do. - - -     | 25   |
| Total, - - -              | —105 |

## STATEMENT

*Of Freight shipped both ways on the Monongahela Slack  
Water, during the year ending Dec. 31, 1847.*

| Shipped Eastward from Pittsburgh. |            | Arrived Westward at Pittsburgh.                                                                             |           |
|-----------------------------------|------------|-------------------------------------------------------------------------------------------------------------|-----------|
| Salt, barrels,                    | 10,155     | Lime, bushels,                                                                                              | 38,155    |
| Empty, " "                        | 4,511      | Wheat, " "                                                                                                  | 16,787    |
| Whiskey, " "                      | 2,193      | Sand, " "                                                                                                   | 199,413   |
| Potatoes, bushels,                | 192        | Oats, &c. " "                                                                                               | 71,887    |
| Boards, feet,                     | 3,400,856  | Potatoes, " "                                                                                               | 904       |
| Timber, feet lineal,              | 140,753    | Flour, barrels,                                                                                             | 79,933    |
| Pig Iron, tons,                   | 1,251      | Whiskey, " "                                                                                                | 6,092     |
| Shingles, No.                     | 1,129,300  | Salt, " "                                                                                                   | 787       |
| Hoop Poles, " "                   | 7,200      | Apples, " "                                                                                                 | 15,544    |
| Lath, " "                         | 362,900    | Cider, " "                                                                                                  | 287       |
| Brick, " "                        | 86,628     | Empty, " "                                                                                                  | 268       |
| Carriages, " "                    | 21         | Iron Ore, tons,                                                                                             | 105       |
| Wagons, " "                       | 45         | Pig Iron, " "                                                                                               | 846       |
| Horses, " "                       | 39         | Hay, " "                                                                                                    | 93        |
| Hogs, " "                         | 3,185      | Wood, cords,                                                                                                | 109       |
| Dried Fruit, lbs.                 | 256,014    | Stone, perch,                                                                                               | 2,243     |
| Tobacco, " "                      | 1,240,347  | Posts, No.                                                                                                  | 2,525     |
| Butter, Lard, &c.                 | 1,304,960  | Staves, " "                                                                                                 | 81,940    |
| Beeswax & Ginseng, lbs.           | 42,217     | Hoop Poles, " "                                                                                             | 16,626    |
| Feathers and Wool, - lbs.         | 278,347    | Brick, " "                                                                                                  | 627,500   |
| Bacon & Pork, " "                 | 1,187,721  | Carriages, " "                                                                                              | 38        |
| Other class frt. " "              | 10,430,080 | Wagons, " "                                                                                                 | 147       |
|                                   |            | Horses, " "                                                                                                 | 79        |
|                                   |            | Hogs, " "                                                                                                   | 106       |
|                                   |            | Hulls, " "                                                                                                  | 22        |
|                                   |            | W. Glass, boxes,                                                                                            | 60,285    |
|                                   |            | Boards, feet,                                                                                               | 617,612   |
|                                   |            | Timber, " lineal,                                                                                           | 169,926   |
|                                   |            | Iron, lbs.                                                                                                  | 1,184,377 |
|                                   |            | Nails, " "                                                                                                  | 988,000   |
|                                   |            | East. Mdse. " "                                                                                             | 7,629,814 |
|                                   |            | Other class freight,<br>grain excepted, lbs.                                                                | 732,357   |
|                                   |            | Total Pounds Westward, exclusive<br>of Wood, Sand, Posts, Carriages,<br>Wagons, Hulls, Boards and T<br>ber, | 26,311    |
|                                   |            |                                                                                                             | 26,311    |

ED

WATER IN 1847.

| Month        | POOL No. 3. |                |            | POOL No. 4. |            |         |
|--------------|-------------|----------------|------------|-------------|------------|---------|
|              | Bts.        | Bushels.       | Tolls.     | Bts.        | Bushels.   | Tolls.  |
| Jan.         | 00          | 5 33,165       | \$71 69    | ...         | .....      | .....   |
| Feb.         | 72          | 4 26,769       | 12 74      | 4           | 15,026     | \$37 94 |
| Mar.         | 94          | 17 100,491     | 200 09     | 23          | 127,602    | 225 71  |
| April        | 53          | 6 33,631       | 84 58      | 17          | 92,023     | 176 80  |
| May          | 84          | .....          | .....      | 1           | 1,400      | 4 06    |
| June         | 60          | 2 13,716       | 7 82       | 1           | 1,500      | 4 37    |
| July         | 17          | 42 253,947     | 514 65     | 50          | 275,445    | 532 11  |
| Aug.         | 51          | .....          | .....      | .....       | .....      | .....   |
| Sept.        | 30          | .....          | .....      | .....       | .....      | .....   |
| Oct.         | 51          | 22 141,829     | 284 14     | 26          | 139,483    | 200 59  |
| Nov.         | 08          | 16 99,251      | 224 31     | 31          | 163,496    | 307 68  |
| Dec.         | 05          | 4 26,402       | 69 22      | 7           | 35,990     | 39 59   |
| <b>Total</b> |             | 25,118,729,201 | \$1,469 24 | 160,851,965 | \$1,528 85 |         |

COMPARISON OF COAL STATISTICS

For 1846 and 1847.

| Month | 1846.      | 1847.      | Inc. in 1847. |           |
|-------|------------|------------|---------------|-----------|
| Jan   |            |            |               |           |
| Feb   |            |            |               |           |
| Mar   |            |            |               |           |
| Apr   |            |            |               |           |
| May   | Flats,.... | 2,519      | 2,989         | 470       |
| June  | Boats, ... | 938        | 1,062         | 124       |
| July  |            |            |               |           |
| Aug   | in Flats,  | 2,512,475  | 3,131,130     | 588,655   |
| Sept  | in Boats,  | 5,236,436  | 6,513,997     | 1,277,561 |
| Oct   |            |            |               |           |
| Nov   | Flats, ..  | \$2,117 93 | \$2,877 58    | \$759 65  |
| Dec   | Boats,     | 8,103 35   | 10,364 36     | 2,261 01  |



## STATEMENT

*Of Freight shipped both ways on the Monongahela Slack  
Water, during the year ending Dec. 31, 1847.*

| Shipped Eastward from Pittsburgh. |            | Arrived Westward at Pittsburgh.                                                                                |            |
|-----------------------------------|------------|----------------------------------------------------------------------------------------------------------------|------------|
| Salt, barrels,                    | 10,155     | Lime, bushels,                                                                                                 | 38,155     |
| Empty, " "                        | 4,511      | Wheat, " "                                                                                                     | 16,787     |
| Whiskey, " "                      | 2,193      | Sand, " "                                                                                                      | 199,413    |
| Potatoes, bushels,                | 192        | Oats, &c. " "                                                                                                  | 71,887     |
| Boards, feet,                     | 3,400,856  | Potatoes, " "                                                                                                  | 904        |
| Timber, feet lineal,              | 140,753    | Flour, barrels,                                                                                                | 79,933     |
| Pig Iron, tons,                   | 1,251      | Whiskey, " "                                                                                                   | 6,092      |
| Shingles, No.                     | 1,129,300  | Salt, " "                                                                                                      | 787        |
| Hoop Poles, " "                   | 7,200      | Apples, " "                                                                                                    | 15,544     |
| Lath, " "                         | 362,900    | Cider, " "                                                                                                     | 287        |
| Brick, " "                        | 86,628     | Empty, " "                                                                                                     | 268        |
| Carriages, " "                    | 21         | Iron Ore, tons,                                                                                                | 105        |
| Wagons, " "                       | 45         | Pig Iron, " "                                                                                                  | 846        |
| Horses, " "                       | 39         | Hay, " "                                                                                                       | 93         |
| Hogs, " "                         | 3,185      | Wood, cords,                                                                                                   | 109        |
| Dried Fruit, lbs.                 | 256,014    | Stone, perch,                                                                                                  | 2,243      |
| Tobacco, " "                      | 1,240,347  | Posts, No.                                                                                                     | 2,525      |
| Butter, Lard, &c.                 | 1,304,960  | Staves, " "                                                                                                    | 81,940     |
| Beeswax & Ginseng, lbs.           | 42,217     | Hoop Poles, " "                                                                                                | 16,626     |
| Feathers and Wool, - lbs.         | 278,347    | Brick, " "                                                                                                     | 627,500    |
| Bacon & Pork, " "                 | 1,187,721  | Carriages, " "                                                                                                 | 38         |
| Other class frt. " "              | 10,430,080 | Wagons, " "                                                                                                    | 147        |
|                                   |            | Horses, " "                                                                                                    | 79         |
|                                   |            | Hogs, " "                                                                                                      | 106        |
|                                   |            | Hulls, " "                                                                                                     | 22         |
|                                   |            | W. Glass, boxes,                                                                                               | 60,285     |
|                                   |            | Boards, feet,                                                                                                  | 617,612    |
|                                   |            | Timber, " lineal,                                                                                              | 169,926    |
|                                   |            | Iron, lbs.                                                                                                     | 1,184,377  |
|                                   |            | Nails, " "                                                                                                     | 988,000    |
|                                   |            | East. Mdse. " "                                                                                                | 7,629,814  |
|                                   |            | Other class freight,<br>grain excepted, lbs.                                                                   | 732,357    |
|                                   |            | Total Pounds Eastward, exclusive<br>of Boards, Timber, Shingles, Lath,<br>Carriages and Wagons,                | 26,810,019 |
|                                   |            | Total Pounds Westward, exclusive<br>of Wood, Sand, Posts, Carriages,<br>Wagons, Hulls, Boards and Tim-<br>ber, | 86,816,488 |

P E D

K WATER IN 1847.

| POOL No. 3. |    |               | POOL No. 4. |       |          |            |
|-------------|----|---------------|-------------|-------|----------|------------|
| Month       | s. | Bts. Bushels. | Tolls.      | Bts.  | Bushels. | Tolls.     |
| Jan.        | 00 | 5 33,165      | \$71 69     | ...   | .....    | .....      |
| Feb.        | 72 | 4 26,769      | 12 74       | 4     | 15,026   | \$37 94    |
| Mar.        | 94 | 17 100,491    | 200 09      | 23    | 127,602  | 225 71     |
| April       | 53 | 6 33,631      | 84 58       | 17    | 92,023   | 176 80     |
| May         | 84 | ...           | .....       | 1     | 1,400    | 4 06       |
| June        | 60 | 2 13,716      | 7 82        | 1     | 1,500    | 4 37       |
| July        | 17 | 42 253,947    | 514 65      | 50    | 275,445  | 532 11     |
| Aug.        | 51 | ...           | .....       | ..... | .....    | .....      |
| Sept.       | 30 | ...           | .....       | ..... | .....    | .....      |
| Oct.        | 51 | 22 141,829    | 284 14      | 26    | 139,483  | 200 59     |
| Nov.        | 08 | 16 99,251     | 224 31      | 31    | 163,496  | 307 68     |
| Dec.        | 05 | 4 26,402      | 69 22       | 7     | 35,990   | 39 59      |
| Total,      | 25 | 118,729,201   | \$1,469 24  | 160   | 851,965  | \$1,528 85 |

COMPARISON OF COAL STATISTICS

For 1846 and 1847.

| Month | 1846. | 1847. | Inc. in 1847. |
|-------|-------|-------|---------------|
| Jan.  |       |       |               |
| Feb.  |       |       |               |
| Mar.  |       |       |               |
| Apr.  |       |       |               |
| May   |       |       |               |
| June  |       |       |               |
| July  |       |       |               |
| Aug.  |       |       |               |
| Sept. |       |       |               |
| Oct.  |       |       |               |
| Nov.  |       |       |               |
| Dec.  |       |       |               |



*Passenger Returns of the several Boats navigating the  
Monongahela Slack Water in 1847.*

| BOATS.           | No. Weekly Returns. | PASSENGERS. |        | No. of Locks. | TOLLS.      |
|------------------|---------------------|-------------|--------|---------------|-------------|
|                  |                     | Through.    | Way.   |               |             |
| Consul, - -      | 46                  | 19,207      | 10,794 | 22,739        | \$6,393 48  |
| Louis M' Lane,   | 49                  | 20,179      | 13,094 | 25,729        | 6,845 78    |
| Swatara, - -     | 22                  | 5,763       | 3,920  | 7,678         | 1,978 21    |
| Monterey, -      | 28                  | 384½        | 2,178  | 3,839         | 364 86      |
| Harlem, - -      | 11                  | 10          | 960    | 1,779         | 127 03      |
| Dispatch, -      | 30                  | .....       | 866    | 1,583         | 100 81      |
| Rambler, - -     | 22                  | .....       | 2,765  | 4,164         | 291 48      |
| Camden, - -      | 15                  | .....       | 2,762  | 3,957         | 276 99      |
| Danube, - -      | 6                   | 259         | 406    | 799           | 120 68      |
| Baltic, - - -    | 1                   | 20          | .....  | .....         | 5 00        |
| Transient Boats, | 20                  | 3           | 2,032  | 2,274         | 159 93      |
| Total, - - -     | 250                 | 45,825½     | 39,777 | 74,541        | \$16,674 25 |

*Passenger business in 1846 and '47, compared.*

|                        | 1846        | 1847        | Inc. in 1847. |
|------------------------|-------------|-------------|---------------|
| Through Passengers,    | 34,984½     | 45,825½     | 10,841        |
| Way do.                | 30,268      | 39,777      | 9,509         |
| Total, - - -           | 65,252½     | 85,602½     | 20,350        |
| Toll on Thro' Passeng. | \$8,746 13  | \$11,456 38 | \$2,710 25    |
| Toll on Way do.        | 3,934 42    | 5,217 87    | 1,283 45      |
| Total, - - -           | \$12,680 55 | \$16,674 25 | \$3,993 70    |

## MOORHEAD, ROBERTSON &amp; CO.

*In account with the Monongahela Navigation Company, for  
Receipts and Disbursements for said Company, for the  
year 1847.*

## R E C E I P T S.

|                                  |             |                    |
|----------------------------------|-------------|--------------------|
| Received for sale of Timber, &c. | \$24 69     |                    |
| Tolls received at Lock No. 1,    | 4,552 42    |                    |
| Do.                              | 2, 1,380 90 |                    |
| Do.                              | 3, 697 06   |                    |
| Do.                              | 4, 3,481 45 |                    |
| First quarter, - - -             | <hr/>       | <b>\$10,136 52</b> |
| Received for sale of Timber,     | 15 10       |                    |
| Tolls received at Lock No. 1,    | 8,905 48    |                    |
| Do.                              | 2, 2,445 89 |                    |
| Do.                              | 3, 913 13   |                    |
| Do.                              | 4, 2,634 31 |                    |
| Second quarter, - - -            | <hr/>       | <b>14,913 91</b>   |
| Tolls received at Lock No. 1,    | 7,442 73    |                    |
| Do.                              | 2, 1,257 70 |                    |
| Do.                              | 3, 971 45   |                    |
| Do.                              | 4, 1,751 37 |                    |
| Third quarter, - - -             | <hr/>       | <b>11,423 25</b>   |
| Received for sale of Timber,     | 19 92       |                    |
| Tolls received at Lock No. 1,    | 9,681 67    |                    |
| Do.                              | 2, 3,222 56 |                    |
| Do.                              | 3, 1,178 08 |                    |
| Do.                              | 4, 3,745 70 |                    |
| Fourth quarter, - - -            | <hr/>       | <b>17,847 93</b>   |
|                                  |             | <hr/>              |
|                                  |             | <b>\$54,321 61</b> |

## DISBURSEMENTS.

|                                                                                                                                                                                     |            |                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------|
| Balance due Moorhead, R. & Co. from 1846,                                                                                                                                           |            | \$1,527 67         |
| Expenses for First Quarter,                                                                                                                                                         | \$2,357 17 |                    |
| Do. Second do.                                                                                                                                                                      | 1,522 12   |                    |
| Do. Third do.                                                                                                                                                                       | 1,852 54   |                    |
| Do. Fourth do.                                                                                                                                                                      | 2,717 51   |                    |
| Total expense for 1847,                                                                                                                                                             |            | 8,449 34           |
| Repairs for First Quarter, (nothing.)                                                                                                                                               |            |                    |
| Do. Second do.                                                                                                                                                                      | 91 87      |                    |
| Do. Third do.                                                                                                                                                                       | 858 64     |                    |
| Do. Fourth do.                                                                                                                                                                      | 1,190 98   |                    |
| Total repairs for 1847,                                                                                                                                                             |            | 2,141 49           |
| Interest paid in First Quarter,                                                                                                                                                     | 61 87      |                    |
| Do. Second do.                                                                                                                                                                      | 7,542 38   |                    |
| Do. Third do.                                                                                                                                                                       | 271 16     |                    |
| Do. Fourth do.                                                                                                                                                                      | 7,226 52   |                    |
| Total interest for 1847,                                                                                                                                                            |            | 15,101 93          |
| Old debt paid, First Quarter,                                                                                                                                                       | 1,500 00   |                    |
| Do. Second do.                                                                                                                                                                      | 3,041 99   |                    |
| Do. Third do.                                                                                                                                                                       | 3,267 36   |                    |
| Do. Fourth do.                                                                                                                                                                      | 500 00     |                    |
| Total old debt paid in 1847,                                                                                                                                                        |            | 8,309 35           |
| Construction paid John Allston,<br>balance on contract for building<br>Lock-house at No. 3, - - -                                                                                   | 178 55     |                    |
| Paid Gen. Watson for purchase of<br>additional ground at No. 3, and<br>fencing same, - - -                                                                                          | 1,039 53   |                    |
| Total for construction for 1847,                                                                                                                                                    |            | 1,218 08           |
| Damages paid Adam Coon & Son,<br>amount of judgment and interest, - - -                                                                                                             | 2,834 27   |                    |
| Leaving a balance in the hands of Moorhead,<br>Robertson & Co. of which \$13,500 has been<br>directed to be applied to the liquidation of<br>Bonds, on the 1st January, 1848, - - - |            | 14,739 48          |
|                                                                                                                                                                                     |            | <u>\$54,321 61</u> |

I hereby certify that the foregoing account of Moorhead, Robertson & Co. is correct, and agrees with the quarterly statements and vouchers, which have been duly audited and approved by the appropriate committee of the Board of Managers, agreeably to the terms of the mortgage.

THOMAS M. HOWE,

PITTSBURGH, JAN. 1, 1848.

Treas'r. Mon. Nav. Co.

STATEMENT OF THE AFFAIRS OF THE  
**MONONGAHELA NAVIGATION COMPANY,**

**December 31st, 1847.**

|                                  |                   |                                                        |                   |
|----------------------------------|-------------------|--------------------------------------------------------|-------------------|
| Construction, -                  | \$494,039 03      | Capital Stock, -                                       | \$260,600 00      |
| Damages, - - -                   | 9,686 18          | Less, amount due by delinquent Stockholders, 13,420 10 |                   |
| Additional Lock at Dam No. 1, -  | 13,500 00         |                                                        | \$247,179 90      |
|                                  | —————\$517,225 21 | Bonds issued, - - -                                    | 247,000 00        |
| Stock Monongahela Navigation Co. | 400 00            | Outstanding Warrants, - - -                            | 14 00             |
| Bills Receivable, - - -          | 50 00             | Bills Payable, - - -                                   | 4,000 00          |
| Cash, - - -                      | 488 00            | Profit and Loss, - - -                                 | 34,709 63         |
| Moorhead, Robertson & Co. - - -  | 14,739 48         |                                                        | —————\$532,903 53 |
| James Veech, Esq. - - -          | 84                |                                                        |                   |
|                                  | —————             |                                                        |                   |
|                                  | \$532,903 53      |                                                        |                   |

ATTEST—

THOMAS M. HOWE, *Treas'r.*

## STATEMENT OF THE STOCK ACCOUNT OF THE

## MONONGAHELA NAVIGATION COMPANY,

December 31st, 1847.

|                                    |              |                                              |
|------------------------------------|--------------|----------------------------------------------|
| Whole number of Shares subscribed, |              |                                              |
| 5,212, at \$50,                    | \$260,600 00 |                                              |
|                                    |              | Number of Shares which have been             |
|                                    |              | paid in full, 4,899, at \$50, - \$244,950 00 |
|                                    |              | No. of Shares delinquent, 313 at \$50,       |
|                                    |              | on which there has been                      |
|                                    |              | paid, - - - \$2,229 90                       |
|                                    |              | Remaining unpaid, 13,420 10                  |
|                                    |              | 15,650 00                                    |
|                                    | \$260,600 00 | \$260,600 00                                 |

Arrest—

THOMAS M. HOWE, *Treas'r.*



# RATES OF TOLL

## To be charged on the Monongahela Slack Water,

ON AND AFTER FEBRUARY 1, 1848.

-----  
**Class No. 1.—Forty Cents per 1.000 pounds.**

|                               |                              |
|-------------------------------|------------------------------|
| Copper of all kinds,          | Merchandise not specified,   |
| Confectionery,                | Marble, manufactured,        |
| Drugs and Medicines,          | Oils, Paints and Dye-Stuffs, |
| Furniture,                    | Oysters,                     |
| Feathers,                     | Paper of all kinds,          |
| Fruits not specified,         | Queensware and Chinaware,    |
| Furs, Peltry and Skins,       | Ropes and Cordage,           |
| Glassware,                    | Spices,                      |
| Hides, dry,                   | Steel,                       |
| Hardware and Cutlery,         | Steam Engines & Machinery,   |
| Leather, dressed & undress'd, | Tin and Tinware,             |
| Lead, white, red & Litharge,  | Tobacco, manufactured,       |
| Liquors, foreign,             | Wool.                        |

*Way Freight 11 Cents per 1.000 pounds, per Lock.*

-----  
**Class No. 2.—Thirty Cents per 1.000 pounds.**

|                                       |                                   |
|---------------------------------------|-----------------------------------|
| Agricultural Products not specified,  | Groceries not specified,          |
| Agricultural Implements do.           | Glauber Salts,                    |
| Ale, Beer and Porter,                 | Ginseng,                          |
| Anvils,                               | Hemp, Oakum and Flax,             |
| Blooms,                               | Hides, Green and Salted,          |
| Butter, Bacon and Beef,               | Iron, Rolled & Hammered,          |
| Chair Stuff, turned,                  | Lard and Tallow,                  |
| Copperas,                             | Molasses,                         |
| Coffee,                               | Marble, Sawed or in Blocks,       |
| Cheese,                               | Nails and Spikes,                 |
| Cotton and Cotton Yarns,              | Old Cordage,                      |
| Castings,                             | Pork,                             |
| Dried Apples and Peaches,             | Powder,                           |
| Doors and Blinds for Steam Boats, &c. | Pitch, Tar, Rosin and Turpentine. |
| Earthen and Stone Ware,               | Rags,                             |
| Fish,                                 | Saleratus,                        |
| Flax and other Seeds,                 | Saltpetre,                        |
|                                       | Tobacco Leaf.                     |

*Way Freight 8 Cents per 1.000 pounds, per Lock.*

**Class No. 3.—Twenty Cents per 1,000 pounds.**

|                              |                             |
|------------------------------|-----------------------------|
| Ashes, Pot, Pearl, & Scorch- | Lead in Pigs and Bars,      |
| Cut Stone,                   | [ings, Plaster, Paris,      |
| Grind and Mill Stones and    | Scraps and broken Castings, |
| Burr Blocks,                 | Spanish Whiting & Barytes,  |
| German Clay and Gypsum,      | Wheat and other Grain,      |
| Hydraulic Cement,            | White or Louisville Lime.   |

*Way Freight 6 Cents per 1,000 pounds per Lock.*

On all articles not above enumerated, Thirty Cents per 1,000 lbs.

**Steam Boats, Keels, Flats and Flat Boats.**

|                                         |       |         |
|-----------------------------------------|-------|---------|
|                                         | Thro. | Per Lk. |
| In addition to Toll on Cargo, . . . . . | 1 50  | 50      |

No Boat shall be charged more than \$1 50 per day, or \$1 00 for a single Trip to or from Monongahela city.

**MISCELLANEOUS.**

|                                                        | Thro.           | Per Lk.         |
|--------------------------------------------------------|-----------------|-----------------|
| Apples, . . . . . per bbl.                             | 3               | $\frac{3}{4}$   |
| Flour, . . . . . per bbl.                              | 5               | $1\frac{1}{2}$  |
| Whiskey, . . . . . per bbl.                            | 8               | 2               |
| Salt, (nominal,) . . . . . per bbl.                    | 5               | $1\frac{1}{2}$  |
| Cider, . . . . . per bbl.                              | 6               | $1\frac{1}{2}$  |
| Empty Molasses and Whiskey barrels, . . . each,        | 2               | $\frac{1}{2}$   |
| Empty Flour, Apple and Salt barrels, . . . each,       | 1               | $\frac{1}{4}$   |
| Window Glass, . . . . . per box.                       | 2 $\frac{1}{2}$ | $\frac{3}{4}$   |
| Lime, . . . . . per bush.                              | 1               | $\frac{1}{4}$   |
| Potatoes and Turnips, . . . . . per bush.              | 1               | $\frac{1}{4}$   |
| Manure, . . . . . per 1,000 lbs.                       | 8               | 2               |
| Roughstone and Limestone, . . . . . per perch,         | 12              | 3               |
| Iron Ore, . . . . . per ton,                           | 16              | 4               |
| Pig Iron, descending, . . . . . per ton,               | 45              | 12              |
| Pig Iron, ascending, . . . . . per ton,                | 33              | 9               |
| Hay and Straw, . . . . . per ton,                      | 40              | 11              |
| Fire Wood, . . . . . per cord,                         | 25              | 7               |
| Bark, . . . . . per cord,                              | 40              | 11              |
| Posts and Rails, . . . . . per 100 count,              | 25              | 7               |
| Brick, (Fire,) . . . . . per 100 count,                | 8               | 2 $\frac{1}{2}$ |
| Brick, (Common,) . . . . . per 100 count,              | 3 $\frac{1}{2}$ | 1               |
| Staves, headings, for pipes & hhd. per 100 count,      | 8               | 2               |
| Staves and headings, barrels, . . . . . per 100 count, | 4               | 1               |

|                                                     | Thro | Pr. Lk. |
|-----------------------------------------------------|------|---------|
| Hoop Poles, hogsheads,.....per 100 count,           | 5    | 1½      |
| Hoop Poles, barrels,.....per 100 count,             | 3    | 1       |
| Shingles, .....per 1000 count,                      | 10   | 3       |
| Lath, .....per 1000 count,                          | 8    | 2       |
| Timber in Rafts, ..... per 100 ft.                  | 20   | 6       |
| Boards, Scantling and other sawed                   |      |         |
| Lumber, ascending, board measure, . . .per 1000 ft. | 30   | 8       |
| Do. descending, .....per 1000 ft.                   | 20   | 5       |
| Carriages and large Wagons,.....each,               | 50   | 12½     |
| Buggys, small Wagons, Carts, &c. ....each,          | 25   | 6½      |
| Horses and Horned Cattle, .....each,                | 25   | 7       |
| Hogs, Sheep and Calves,.....each,                   | 6    | 1½      |
| PASSENGERS, .....each,                              | 25   | 7       |

All Passengers and Freights carried in any Boat, on the Pools, to and from points between Locks, shall pay the same toll as if taken through one Lock, to be returned and paid as other Way-Passengers and Freights. Also, all Freight and Passengers taken on board or landed at any Lock, shall be charged for that Lock.

#### Hulls of Steamers exclusive of Cargo.

| MEASUREMENT:—                       | Tons  | PER LOCK. |
|-------------------------------------|-------|-----------|
| 50 Tons or under, . . . . .         | 8 00  | 2 50      |
| Do. 50 to 100 Tons, . . . . .       | 12 00 | 3 50      |
| Do. 100 to 200 Tons, . . . . .      | 15 00 | 5 00      |
| Do. 200 to 300 Tons, . . . . .      | 25 00 | 7 00      |
| Do. 300 Tons and upwards, . . . . . | 35 00 | 10 00     |

#### Coal, Coke and Sand.

|                     | Pool No.    | Distance, P. M. |     | Lock No.   | Tonnage |
|---------------------|-------------|-----------------|-----|------------|---------|
|                     |             | mi.             | ft. |            |         |
| Each 1.000 bushels, | Pool No. 4, | 16              | 0   | Lock No. 4 | 20      |
| Do. do.             | Pool No. 3, | 15              | 3   | Lock No. 3 | 30      |
| Do. do.             | Pool No. 2, | 14              | 4   | Lock No. 2 | 40      |
| Do. do.             | Pool No. 1, | 10              | 5   | Lock No. 1 | 50      |

No additional toll to be charged on Boats laden with Coal, Coke, Lime, Brick or Sand, descending, or on Tow Boats having in tow Coal Flats without Freight or Passengers. But no Boat so laden shall pay less than 50 cents per Lock.

On all articles descending the Monongahela and Youghiogheny rivers, from any point more than one mile above the influence of the Slack-water, in Flats and Flat-boats, not intended to return, the Collector who clears the same shall, upon satisfactory evidence thereof, allow and make a reduction of 50 per cent. from the above rates.

In the Collection of Tolls, all articles to be charged at their exact weight; but when not weighed, the annexed articles are to be computed as follows:—

|                                         |                                      |
|-----------------------------------------|--------------------------------------|
| Beef & Pork, salted;                    | Corn, Rye and Seeds,                 |
| Rosin, Oil all kinds, pr. bbl. 280 lbs. | of all kinds, .... per bush. 56 lbs. |
| Fish, salted, ..... pr. bbl. 300 lbs.   | Oats, ..... per bush. 30 lbs.        |
| Tar, (28 gall.) .... pr. bbl. 320 lbs.  | Wheat, ..... per bush. 60 lbs.       |
| Barley & Buckwht. pr. bus. 45 lbs.      | Oysters, (Shell).. per bush, 75 lbs. |

## RULES AND REGULATIONS.

I. All Masters of Steam Boats, Keel Boats, Barges, or Flat Boats, laden with produce, &c. shall present to the Collector at the first lock a Manifest of Cargo, so arranged as to enable him readily to calculate the tolls, containing,

*First*—The name of each place on the river where any portion of such property was shipped, and of the place for which it is intended to be cleared.

*Second*—A statement exhibiting the number of boxes, bales, barrels, casks, and various packages of which the cargo consists; the weight of all articles of property on which toll is charged by the ton, or one thousand pounds; the number of articles on which toll is charged by the number; the feet of each article on which toll is charged by the foot; and the brand and number of boxes in each separate lot of Window Glass.

*Third*—A specification of the weight or quantity of each article, where a different rate of toll is charged on different articles, on which toll is so computed. And in case of the neglect or refusal of any Master or Owner to comply with the second and third articles of this regulation, the whole cargo shall be charged with tolls at the rate of those articles on board paying the highest rate of toll.

II. The tolls shall be paid at the first lock passed by a boat, and upon payment thereof, the Master of the boat shall receive a clearance, on which shall be noted the weight of the different articles, the different classes to which they belong, and the total amount of tolls paid.

elevation of the wall, exceeding as it does that of the original structure about four feet, has placed it to a very great extent above the influence of high water, while the depression of the mitre sill to a point two feet lower than that of the old Lock, will protect it equally from any embarrassment arising from the opposite cause. These, however, although very important, are not the only advantages to be derived from this change. The construction of this new Lock, was mainly undertaken for the accommodation of the great and growing trade in the article of coal, although the whole revenue received from that source since the opening of navigation has fallen short of the cost of this *improvement*; the dimensions of the new Lock has been so enlarged as to greatly facilitate the passage of descending coal boats, and to enable tow boats in most cases to pass with their entire fleet. The capacity of the chamber is 56 by 250 feet, and the total cost about fifty thousand dollars.

It is but an act of justice to the contractors, Messrs. Alstons & Hannay, to say, that although prosecuted under great difficulties, they have raised, in its completion, a monument to their own mechanical skill which may safely challenge a comparison with any similar structure in the Union.

The Stockholders will no doubt be gratified to learn, as the Board are to inform them, that, as in former years, no interruption has occurred in the navigation for a single day, from any of those causes to which this improvement was supposed to be so peculiarly exposed; high and low water have proved alike harmless; while the favorite idea of a long obstruction from the formation of ice upon its deep and quiet pools has been exploded by the fact that, for the last three winters, the boats employed in the trade have been making their daily trips to Brownsville, while the river was locked up by ice beyond that point.

The amount of tolls received during the past year, as shown by the Report of the Treasurer, is \$56,623,93, being

an excess of \$2,362,03 over the receipts of the preceding year. This difference is not perhaps so great as might under ordinary circumstances have been expected; yet when it is remembered that during the autumn of 1847 the trade upon the Public works was suspended by the destruction of a large portion of the Canal along the Juniata, and in consequence thereof, a large portion of the carrying trade in both directions between the Atlantic and Ohio river was thrown upon the Monongahela, and when it is considered moreover, that by reason of the low water in the Ohio river during the last summer, there was no sufficient outlet for coal, and no increase therefore in the toll upon that article, it is perhaps rather to be wondered that there was any excess at all. That there was, under such circumstances, is only another evidence of the steady and irrepressible growth of the business upon your improvement, even independently of those causes upon which it was supposed most essentially to depend.

The net income arising from the works during the past year, after payment of expenses and repairs, amounts to \$44,224.

This amount being applicable to the payment of the debt due to the mortgagees, as the opening of the books failed to produce funds for that purpose, it was so applied, and has been carried to the accounts of the Stockholders in the proportion of their respective interests, in conformity with the act of the last session of the Legislature, and already constitutes a credit to them under the operation of said act, of eight dollars for every share by them respectively held; and hereafter as the revenue is from time to time applied to the payment of the debts due for the construction of the work, the amounts so applied will be credited to the Stockholders until such credits shall amount to fifty dollars per share, when a certificate of stock will issue, for an additional share, for each share held by him.

The equity of this provision, which the Legislature saw proper to make, is so manifest as scarcely to require a

remark at our hands. The Capital Stock was grossly inadequate to the completion of the work. The company were authorized to take additional subscriptions to the amount required for that purpose—they opened their books in vain. The public confidence was not sufficient to induce the capitalists to come to their aid; a great public enterprise was about to perish for want of what public spirit ought to have furnished, even if private interest, which is generally so sharp sighted, had failed to discover the value of the investment. The stockholders whose means had been exhausted, came forward under these circumstances, without hesitation, and hypothecated the work, and placed its probable revenues beyond their reach for an indefinite period of years, in order to insure its completion. The debt thus incurred being for the *construction* of Locks and Dams Nos. 3 and 4, ought to have been paid by an additional subscription of stock. It has been partially, and will be entirely, paid out of the receipts, which would, in case of an adequate subscription in the first instance, have gone into the pockets of the stockholders in the shape of dividends. Until it is paid, no matter how remote the period, the original stockholder, *who is thus paying it*, is receiving nothing in return, and the Legislature has deemed it but fair and just that he should be credited for his whole outlay, whether by subscription in the first place, or by surrender of the income to which his money would have entitled him, and have so provided in the act referred to.

It will be perceived by reference to the annexed Report of the Treasurer, that the entire cost of the works is as follows, viz:

|                                               |            |
|-----------------------------------------------|------------|
| Construction, including lock houses and lots, | 494,279 28 |
| Damages paid,                                 | 10,795 80  |
| Additional Lock at Dam No. 1, about,          | 50,000 00  |

---

Making a total investment of capital of      \$555,075 08

|                                                                        |         |
|------------------------------------------------------------------------|---------|
| The whole number of shares of stock subscribed amounts to 5212 at \$50 | 260,600 |
| Of which there remains unpaid                                          | 13,000  |

Amount paid in \$247,600

It has been already remarked, that notwithstanding the great increase of the coal trade, which has been occasioned by the construction of this improvement, the entire aggregate of tolls derived from that source has been so inconsiderable as to fall short of the cost of the new Lock which has been constructed mainly for its accommodation. The fact is attributable to the extreme lowness of the duty assessed upon that article. It has not however been sufficient to prevent complaint in some quarters of the weight of the burthen thus imposed, and efforts have accordingly been made to induce the Board to submit to a reduction. This, however, in justice to the stockholders, they could not consent to allow.

The toll now levied upon coal, is greatly below that charged upon any other improvement in the Union, as will be shown by the following comparative statement, exhibiting the amount charged upon a boat load of 1000 bushels, transported fifty-six miles, on the following improvements respectively, viz:

|                                        | per 1000 bush. or per ton.              |
|----------------------------------------|-----------------------------------------|
| Pennsylvania Canal, - - - \$10,08      | 28 $\frac{1}{2}$ cts.                   |
| Schuylkill Navigation, - - - 11,85     | 33 "                                    |
| Tide Water Canal. - - - 9,92           | 27 $\frac{77}{100}$ "                   |
| Erie Extension, - - - 7,84             | 21 $\frac{95}{100}$ "                   |
| Penna. and Ohio Canal, - - - 10,24     | 28 $\frac{67}{100}$ "                   |
| Muskingum Lock Nav. - - - 7,36         | 20 $\frac{81}{100}$ "                   |
| Green, Barren & Kentucky rivers 9,00   | 25 $\frac{20}{100}$ "                   |
| <b>Monongahela Navigation, - 2,91!</b> | <b>8<math>\frac{14}{100}</math> !!!</b> |

The above statement discloses the fact that coal is carried the entire length of your improvement at less than 3 mills per bushel, or a fraction over 8 cents per ton; and when it is considered that four-fifths of the labor and



expenses of attending our Locks is chargeable to this item, and it pays less than one-fourth of the whole amount of tolls received upon the work, and that this trade has been not merely facilitated, but in point of fact almost *created* by the improvement, and that moreover, at no very distant day, in consequence of other lines of improvement which are now in process of construction, the company will be deprived of that fruitful source of revenue arising from the transit of passengers and merchandise between the east and west, and thrown upon its local trade for support, it is not reasonable, nor is it to be expected, that they should consent to abandon all hope of profit from that branch of business for which their work was in the first place principally designed. If they did, the necessary result would be, (in the event of the diversion of the through trade,) that the burthen of supporting this improvement, thus removed from the article of coal, would be thrown upon the agricultural and manufacturing labor of the Monongahela valley; and yet there is no interest which has profited to the same extent from its construction as that which is now sought to be exempted almost entirely from a fair contribution to its support. The owners of coal lands have been provided by it with a safe and convenient harbor for loading and keeping their boats, the market of Pittsburgh has been rendered accessible to them at all seasons of the year, and they are now enabled to reach the Ohio and avail themselves of the Allegheny floods, which heretofore ran idly by without a Monongahela keel to disturb their depths; and as a consequence of all this their lands have more than quadrupled in value!! Well, therefore, may it be said in reply to their demands, that they are sufficiently favored already, instead of being entitled to an almost entire exemption at the expense either of the company, or of the *agricultural* and *manufacturing* interests of the valley.

Notwithstanding, however, the occasional murmurs of a portion of the coal dealers of the upper end of our im-

provement, we are most happy to be enabled to state that with the increase of the local trade and the development of the great agricultural and mineral resources of the valley, the work has been advancing steadily in popularity with the dwellers along the river, and has already sufficiently refuted the calumnies of the interested, and lived down the predictions of its enemies. If there be any exception, it is of such a character as to be scarcely entitled to the notice of the Board. It is true, that during the past season a systematic effort has been made on the part of a few individuals, to manufacture a public opinion favorable to their own private feelings of hostility to the company; and for this purpose the press has been put in requisition to prepare and inflame the minds of the people; local meetings have been got up for the purpose of enabling the prime movers to procure a public endorsement of assertions in which it is difficult to determine whether ignorance of the *law and facts*, or gross and wilful misrepresentation be entitled to the predominance. The Board were advised of the premeditated movement, and urged by many of the friends of the work along the river, to take the proper steps to undeceive the people, expose the motives of the projectors and agitators, and thus counteract the effects of their labors in their own private quarrels; all this they might very readily have done, from the abundant materials that were in their possession for that purpose. They did not choose, however, to compromise the dignity of the company, by pleading before a jurisdiction whose authority they could not recognise. They felt that standing as they did, as the representatives of a great public improvement, acting upon its public rights, and its high claims to public consideration, it was not for them to appear before any self-constituted tribunal to bandy epithets with their accusers, or reply to the venomous assaults of individual malignity. Before the Legislature and the Courts, which they conceive to be the proper tribunals, they are ready and willing at any and all times to appear, and meet any charges of violation of either law or constitution.

# OFFICERS.

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**PRESIDENT—J. K. MOORHEAD.**

**TREASURER—THOMAS M. HOWE.**

## **MANAGERS.**

**JOHN ANDERSON,**

**THOMAS BAKEWELL,**

**JAMES W. BURBRIDGE,**

**GEORGE W. CASS,**

**NEVILLE B. CRAIG,**

**JOHN L. DAWSON,**

**WILLIAM EICHBAUM,**

**S. R. JOHNSTON,**

**JOHN TASSEY,**

**R. C. TOWNSEND.**

**SECRETARY—WM. BAKEWELL.**

TO THE STOCKHOLDERS  
OF THE  
MONONGAHELA NAVIGATION COMPANY.

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THE BOARD OF MANAGERS have, in accordance with established usage, the honor to submit the following Report, touching the condition of your works, and the operations thereupon during the year which has just closed.

They are most happy to be enabled to state that no casualty has occurred upon the line to create any unusual draw upon their resources; the amount expended for ordinary repairs has been so inconsiderable as to constitute a very trifling item in the expense account, and the experience of the year, especially during the recent high flood, has only added to the already existing proofs of the great durability of the improvements.

It is equally gratifying to have it in their power to announce the completion of the additional Lock at Dam No. 1, which was placed under contract during the preceding year. This important addition to our works, achieved at so considerable a cost to the company, in deference to the wants and wishes of those who navigate our improvement, and having reference to the prospective growth of the trade and business upon the river, has effectually obviated any difficulties which have heretofore existed at that point, in low water, and has by trebling the capacity of the work, insured the company against all complaint from that source hereafter. The increased

elevation of the wall, exceeding as it does that of the original structure about four feet, has placed it to a very great extent above the influence of high water, while the depression of the mitre sill to a point two feet lower than that of the old Lock, will protect it equally from any embarrassment arising from the opposite cause. These, however, although very important, are not the only advantages to be derived from this change. The construction of this new Lock, was mainly undertaken for the accommodation of the great and growing trade in the article of coal, although the whole revenue received from that source since the opening of navigation has fallen short of the cost of this *improvement*; the dimensions of the new Lock has been so enlarged as to greatly facilitate the passage of descending coal boats, and to enable tow boats in most cases to pass with their entire fleet. The capacity of the chamber is 56 by 250 feet, and the total cost about fifty thousand dollars.

It is but an act of justice to the contractors, Messrs. Alstons & Hannay, to say, that although prosecuted under great difficulties, they have raised, in its completion, a monument to their own mechanical skill which may safely challenge a comparison with any similar structure in the Union.

The Stockholders will no doubt be gratified to learn, as the Board are to inform them, that, as in former years, no interruption has occurred in the navigation for a single day, from any of those causes to which this improvement was supposed to be so peculiarly exposed; high and low water have proved alike harmless; while the favorite idea of a long obstruction from the formation of ice upon its deep and quiet pools has been exploded by the fact that, for the last three winters, the boats employed in the trade have been making their daily trips to Brownsville, while the river was locked up by ice beyond that point.

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| Construction, including lock houses and lots, | 494,279 28 |
| Damages paid,                                 | 10,795 80  |
| Additional Lock at Dam No. 1, about,          | 50,000 00  |

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Making a total investment of capital of      \$555,075 08

|                                                                        |         |
|------------------------------------------------------------------------|---------|
| The whole number of shares of stock subscribed amounts to 5212 at \$50 | 260,600 |
| Of which there remains unpaid                                          | 13,000  |

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|                                  |              | per 1000 bush. or per ton.              |
|----------------------------------|--------------|-----------------------------------------|
| Pennsylvania Canal, - - -        | \$10,08      | 28 $\frac{1}{4}$ cts.                   |
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| <b>Monongahela Navigation, -</b> | <b>2,91!</b> | <b>8<math>\frac{14}{100}</math> !!!</b> |

The above statement discloses the fact that coal is carried the entire length of your improvement at less than 3 mills per bushel, or a fraction over 8 cents per ton; and when it is considered that four-fifths of the labor and



expenses of attending our Locks is chargeable to this item, and it pays less than one-fourth of the whole amount of tolls received upon the work, and that this trade has been not merely facilitated, but in point of fact almost *created* by the improvement, and that moreover, at no very distant day, in consequence of other lines of improvement which are now in process of construction, the company will be deprived of that fruitful source of revenue arising from the transit of passengers and merchandise between the east and west, and thrown upon its local trade for support, it is not reasonable, nor is it to be expected, that they should consent to abandon all hope of profit from that branch of business for which their work was in the first place principally designed. If they did, the necessary result would be, (in the event of the diversion of the through trade,) that the burthen of supporting this improvement, thus removed from the article of coal, would be thrown upon the agricultural and manufacturing labor of the Monongahela valley; and yet there is no interest which has profited to the same extent from its construction as that which is now sought to be exempted almost entirely from a fair contribution to its support. The owners of coal lands have been provided by it with a safe and convenient harbor for loading and keeping their boats, the market of Pittsburgh has been rendered accessible to them at all seasons of the year, and they are now enabled to reach the Ohio and avail themselves of the Allegheny floods, which heretofore ran idly by without a Monongahela keel to disturb their depths; and as a consequence of all this their lands have more than quadrupled in value!! Well, therefore, may it be said in reply to their demands, that they are sufficiently favored already, instead of being entitled to an almost entire exemption at the expense either of the company, or of the *agricultural and manufacturing* interests of the valley.

Notwithstanding, however, the occasional murmurs of a portion of the coal dealers of the upper end of our im-

provement, we are most happy to be enabled to state that with the increase of the local trade and the development of the great agricultural and mineral resources of the valley, the work has been advancing steadily in popularity with the dwellers along the river, and has already sufficiently refuted the calumnies of the interested, and lived down the predictions of its enemies. If there be any exception, it is of such a character as to be scarcely entitled to the notice of the Board. It is true, that during the past season a systematic effort has been made on the part of a few individuals, to manufacture a public opinion favorable to their own private feelings of hostility to the company; and for this purpose the press has been put in requisition to prepare and inflame the minds of the people; local meetings have been got up for the purpose of enabling the prime movers to procure a public endorsement of assertions in which it is difficult to determine whether ignorance of the *law and facts*, or gross and wilful misrepresentation be entitled to the predominance. The Board were advised of the premeditated movement, and urged by many of the friends of the work along the river, to take the proper steps to undeceive the people, expose the motives of the projectors and agitators, and thus counteract the effects of their labors in their own private quarrels; all this they might very readily have done, from the abundant materials that were in their possession for that purpose. They did not choose, however, to compromise the dignity of the company, by pleading before a jurisdiction whose authority they could not recognise. They felt that standing as they did, as the representatives of a great public improvement, acting upon its public rights, and its high claims to public consideration, it was not for them to appear before any self-constituted tribunal to bandy epithets with their accusers, or reply to the venomous assaults of individual malignity. Before the Legislature and the Courts, which they conceive to be the proper tribunals, they are ready and willing at any and all times to appear, and meet any charges of violation of either law or constitution.

The Board have already adverted to the probable effects of the completion of other lines of improvement, in the diversion, at no very remote period, of a large amount of trade and travel between Pittsburgh and the Atlantic cities. If they should suffer however in this direction, there are others to which they may confidently look for an ample indemnity. Amongst these, and first in order, is the Youghiogheny Improvement. This important work is intended to open the navigation of that river as far as West Newton in Westmoreland county; and about eighteen miles above its mouth is now in process of construction, and is expected to be completed during the ensuing season. The immense region of country which this improvement will open up to the Pittsburgh and south-western market, is not surpassed in fertility of soil or mineral resources by any other in the State. The coal of that river has always been distinguished for its excellence, and is found all along its banks, existing in strata of from five to eleven feet in thickness. Passing, as it necessarily will, through two locks, and paying toll upon some seventeen miles of our improvement, it will pay tribute to our work to an extent that will insure from it a most valuable addition to our revenue.

There is another source, however, to which it is thought this company may look with great confidence for a further addition to its revenues, and that is from the prospective extension of the work towards the head of the Monongahela itself. It is known to the stockholders that by an act passed at the last session of the Legislature, the Board were authorized to open books of subscription in the several counties along the river, for the special purpose of extending the improvement to the Virginia State line, and with a proviso that the proceeds of the new Locks should constitute a separate fund for the exclusive benefit of the subscribers, until the old works should be relieved from the debt incurred in their construction. In conformity with this act, books were opened under the direction of the

Board, in the months of May and June, but without meeting with any degree of encouragement; the failure did not, however, arise so much from any want of interest on the part of the people, as from a scarcity of money, which generally exists in agricultural districts. Great and laudable anxiety, however, was manifested amongst the people residing above Brownsville for the extension of the work, and it was suggested that an application would probably be made to the Legislature to authorize a corporate subscription on the part of the county of Greene, with the expectation that the capitalists of Pittsburgh would furnish any balance that might be required. It is apparent that while the prolongation of the work to the Virginia line would afford an outlet to the entire county of Greene and a large portion of Fayette, and thus increase the revenues of our work, it would add very materially at the same time to the rapidly augmenting trade of Pittsburgh, and therefore presents the strongest claims upon the consideration of her citizens. But the advantages would not stop there. If the Baltimore and Ohio Rail Road Company shall proceed with their improvement, in the direction which seems to have been finally agreed upon, a further extension of our work will bring it into direct connexion with that important avenue of commerce and enable us to draw off a side stream of trade and travel in the direction of Pittsburgh, which would render any further extension of that road, if not unnecessary, at least altogether improbable. There is much therefore to encourage the hope that the means will be provided within a reasonable time, for the construction of so important an adjunct to the existing works of the Company.

Upon the whole, we think that there is abundant reason to congratulate the stockholders upon the general condition and prospects of the company, without reference to any of the chances or changes of a distant future. The mineral treasures within our reach, swollen as they will be inevitably, by the rich tribute of the Youghiogheny valley, are

almost boundless in their extent, and may be considered in themselves as more than adequate to supply any demand which can be made upon them; and yet it is almost impossible for the human imagination to assign limits to the demand which is sure to be created by the wants of the Mississippi valley in an article so essential to the comforts of its inhabitants. It must in the nature of things be as limitless as the growth of that mighty region, which is destined to be the home of so many millions of freemen, and will, in the industry it will stimulate, and the wealth it will insure to the dwellers upon the Monongahela, reflect a lasting honor upon the wisdom which projected, and the enterprise which achieved, through great difficulties and trials, a scheme of such extended usefulness as that of the Slack water of the Monongahela river.

Respectfully submitted,

J. K. MOORHEAD,

OFFICE MONONGAHELA NAV. CO. }  
 PITTSBURGH, Jan. 1, 1849. }

*President.*

## STATISTICS

OF THE TRADE, FOR THE YEAR 1848.

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|                                        |   |   |             |
|----------------------------------------|---|---|-------------|
| Receipts from Coal                     | - | - | 12,438 43   |
| " Freight,                             | - | - | 25,913 71   |
| " Passengers,                          | - | - | 18,271 79   |
| Tot. Tolls, year ending Dec. 31, 1848, |   |   | \$56,623 93 |

### *Receipts at the Several Locks.*

|                  |   |   |             |
|------------------|---|---|-------------|
| Lock No. 1,      | - | - | 34,271 21   |
| " No. 2,         | - | - | 8,256 30    |
| " No. 3,         | - | - | 4,346 61    |
| " No. 4,         | - | - | 9,749 81    |
| Total, as above, |   |   | \$56,623 93 |

|                   |           |   |      |
|-------------------|-----------|---|------|
| No. of clearances | Eastward, | - | 1961 |
| " "               | Westward, | - | 2916 |

### *Keel Boat arrivals at Pittsburgh.*

|                    |   |   |    |
|--------------------|---|---|----|
| Monongahela Keels, | - | - | 12 |
| Youghiogheny "     | - | - | 40 |

## STATEMENT.

*Of Freight shipped both ways on the Monongahela Slack  
Water, during the year 1848.*

| Shipped Eastward from Pittsburgh. |            | Arrived Westward at Pittsburgh. |           |
|-----------------------------------|------------|---------------------------------|-----------|
| Flour, bbls.                      | 1,452      | Lime, bushels,                  | 13,839    |
| Salt, "                           | 11,063     | Wheat, "                        | 3,206     |
| Empty, "                          | 13,138     | Sand, "                         | 196,250   |
| Whiskey, "                        | 2,515      | Oats, &c. "                     | 35,110    |
| Potatoes, bushels,                | 2,506      | Potatoes, "                     | 631       |
| Boards, feet,                     | 4,000,231  | Flour, barrels,                 | 60,110    |
| Timber, "                         | 265,520    | Whiskey, "                      | 4,908     |
| Pig Iron, tons,                   | 1,206      | Apples, "                       | 17,967    |
| Copper Ore, "                     | 268        | Cider, "                        | 631       |
| Shingles, No.                     | 1,760,500  | Empty "                         | 1,002     |
| Hoop Poles, "                     | 8,000      | Salt, "                         | 50        |
| Lath, "                           | 331,900    | Iron ore, tons,                 | 149       |
| Brick, "                          | 78,570     | Pig Iron, "                     | 547       |
| Carriages, "                      | 30         | Hay, "                          | 124       |
| Wagons, "                         | 44         | Wood, cords,                    | 139       |
| Horses, "                         | 105        | Stone, perches                  | 3,184     |
| Hogs, "                           | 5,315      | Posts, No.                      | 1,189     |
| Hemp, pounds,                     | 37,642     | Staves, "                       | 81,610    |
| Dried Fruit, "                    | 73,780     | H. Poles, "                     | 16,300    |
| Tobacco, "                        | 549,294    | Lath, "                         | 49,000    |
| Butter; Lard, &c.                 | 1,102,521  | Brick, "                        | 1,200,700 |
| Ginseng & Beeswax,                | 16,378     | Carriages, "                    | 49        |
| Wool & Feathers,                  | 128,552    | Wagons, "                       | 195       |
| Bacon & Pork, lbs.                | 3,032,044  | Horses, "                       | 88        |
| Other class frt.                  | 13,889,486 | Hogs, "                         | 168       |
|                                   |            | Hulls, "                        | 29        |
|                                   |            | W. Glass, boxes,                | 55,186    |
|                                   |            | Boards, feet,                   | 701,722   |
|                                   |            | Timber, "                       | 87,512    |
|                                   |            | Iron, pounds,                   | 697,296   |
|                                   |            | Nails, "                        | 1,209,300 |
|                                   |            | Eastern mdze. lbs.              | 6,246,762 |
|                                   |            | Other class freight,            |           |
|                                   |            | Grain excepted,                 | 1,356,602 |

*Passenger Returns of the Boats running on the Monongahela Slack Water in 1848.*

| BOATS.                           | No. Weekly Returns. | PASSENGERS. |        | No. of Locks. | TOLLS.     |
|----------------------------------|---------------------|-------------|--------|---------------|------------|
|                                  |                     | Through.    | Way.   |               |            |
| Consul, . . . . .                | 4                   | 705½        | 472    | 1060          | \$250 57½  |
| Louis M' Lane, . . . . .         | 46                  | 17,810½     | 10,901 | 21,303        | 5,943 83½  |
| Baltic, . . . . .                | 25                  | 8,994       | 5,791  | 11,120        | 3,026 90   |
| Atlantic, . . . . .              | 44                  | 17,268      | 12,684 | 24,317        | 6,019 19   |
| Dispatch, . . . . .              | 4                   | -----       | 95     | 161           | 11 27      |
| Camden, . . . . .                | 35                  | -----       | 8,373  | 11,776        | 824 32     |
| Danube, . . . . .                | 4                   | 622½        | 765    | 1,453         | 257 33½    |
| Chieftain, . . . . .             | 14                  | -----       | 814    | 1,079         | 75 53      |
| Arrow, . . . . .                 | 34                  | 8           | 4,292  | 7,186         | 505 02     |
| Star, . . . . .                  | 13                  | 3           | 837    | 1,197         | 84 54      |
| Arrowline, . . . . .             | 29                  | 2,026½      | 3,389  | 6,278         | 946 08½    |
| J. B. Gordon }<br>and Ariadne, } | 7                   | 77½         | 147    | 225           | 35 12½     |
| Peytona, . . . . .               | 14                  | -----       | 2,561  | 3,175         | 222 25     |
| Transient boats, . . . . .       | 10                  | 104         | 618    | 626           | 69 82      |
| Total, . . . . .                 | 283                 | 47,619½     | 51,739 | 90,956        | 18,271 79½ |

*Passenger business in 1847 and '48 compared.*

|                        | 1847.       | 1848.      | Inc. in 1848. |
|------------------------|-------------|------------|---------------|
| Through Passengers,    | 45,825½     | 47,619½    | 1,794         |
| Way do.                | 39,777      | 51,739     | 11,962        |
| Total, . . . . .       | 85,602½     | 99,358½    | 13,756        |
| Toll on Thro' Passeng. | \$11,456 38 | 11,904 87½ | 448 49½       |
| Toll on Way do.        | 5,217 87    | 6,366 92   | 1,149 05      |
| Total, . . . . .       | 16,674 25   | 18,271 79½ | 1,597 54½     |



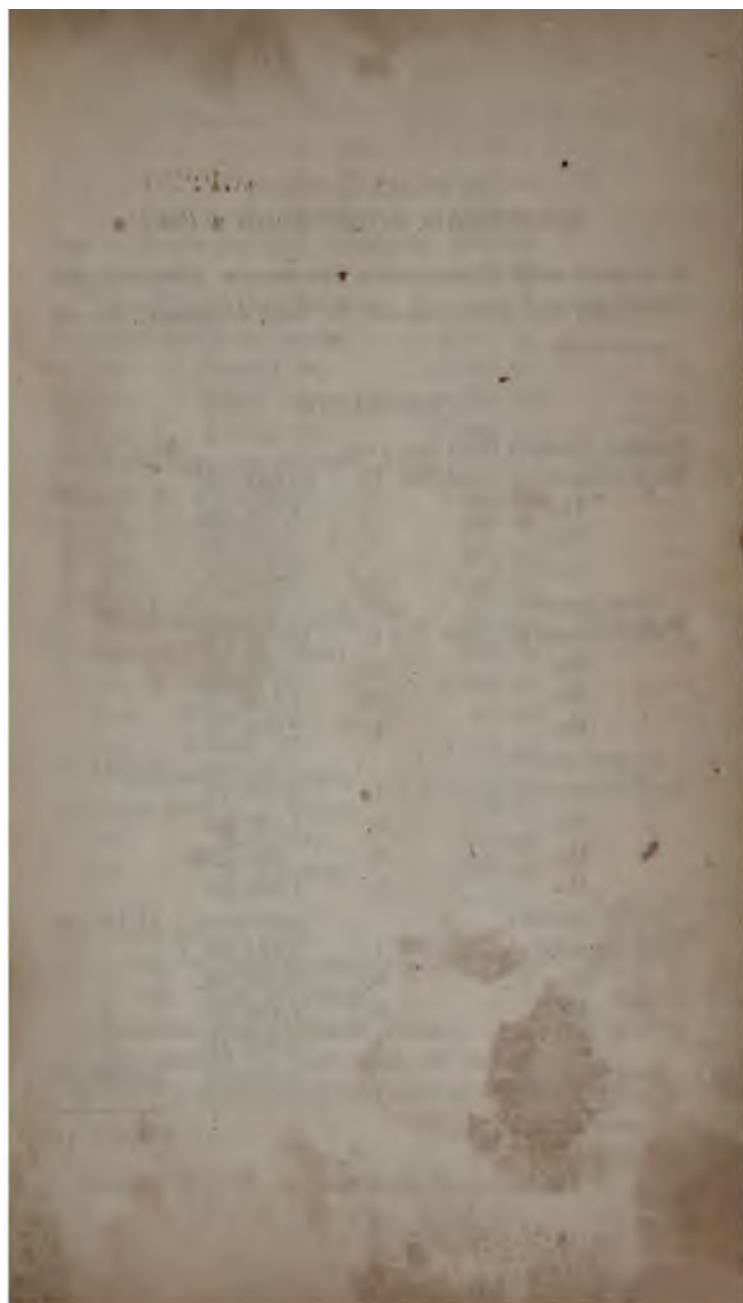
## STATEMENT OF COAL SHIPPED

*In the several Pools of the Monongahela Slackwater,***For 1848.**

| Months.       | Pool No. 1.      | Pool No. 2.      | Pool No. 3.      | P'l No. 4.     | Total.           |
|---------------|------------------|------------------|------------------|----------------|------------------|
|               | BUSHEL.          | BUSHEL.          | BUSHEL.          | BUSHEL.        | BUSHEL.          |
| January,      | 226,794          | 144,923          | 81,926           | 4,200          | 457,843          |
| Febr'y,       | 308,300          | 304,032          | 59,657           | 23,945         | 695,934          |
| March,        | 307,620          | 526,320          | 126,901          | 199,964        | 1,160,805        |
| April,        | 312,200          | 56,520           | 126,301          | 2,000          | 497,021          |
| May,          | 352,400          | 846,481          | 154,063          | 228,025        | 1,580,969        |
| June,         | 180,600          | 65,279           | 68,800           |                | 314,679          |
| July,         | 233,400          | 381,221          | 153,794          | 89,234         | 857,649          |
| August,       | 136,777          | 20,300           | 101,233          | 6,279          | 264,589          |
| Sept.         | 154,600          | 20,175           | 91,900           |                | 266,675          |
| October,      | 272,100          | 63,800           | 126,426          | 71,600         | 533,926          |
| Novem.        | 608,500          | 1,084,880        | 236,997          | 183,127        | 2,113,504        |
| Decem.        | 443,470          | 472,712          | 108,668          | 50,917         | 1,075,767        |
| <b>Total,</b> | <b>3,536,761</b> | <b>3,986,643</b> | <b>1,436,666</b> | <b>859,291</b> | <b>9,819,361</b> |

## RECAPITULATION—YEARLY.

| POOLS.        | Bushels in Boats. | Bushels in Flats. | Tolls.             |
|---------------|-------------------|-------------------|--------------------|
| No. 1,....    | 1,210,964         | 2,325,797         | \$2,384 93         |
| No. 2,....    | 3,800,291         | 186,352           | 5,668 54           |
| No. 3,....    | 625,511           | 811,155           | 3,095 62           |
| No. 4,....    | 859,291           |                   | 1,289 34           |
| <b>Total,</b> | <b>6,496,057</b>  | <b>3,323,304</b>  | <b>\$12,438 43</b> |



## MOORHEAD, ROBERTSON &amp; CO.

*In account with Monongahela Navigation Company, for  
Receipts and Disbursements for said Company, for the  
year 1848.*

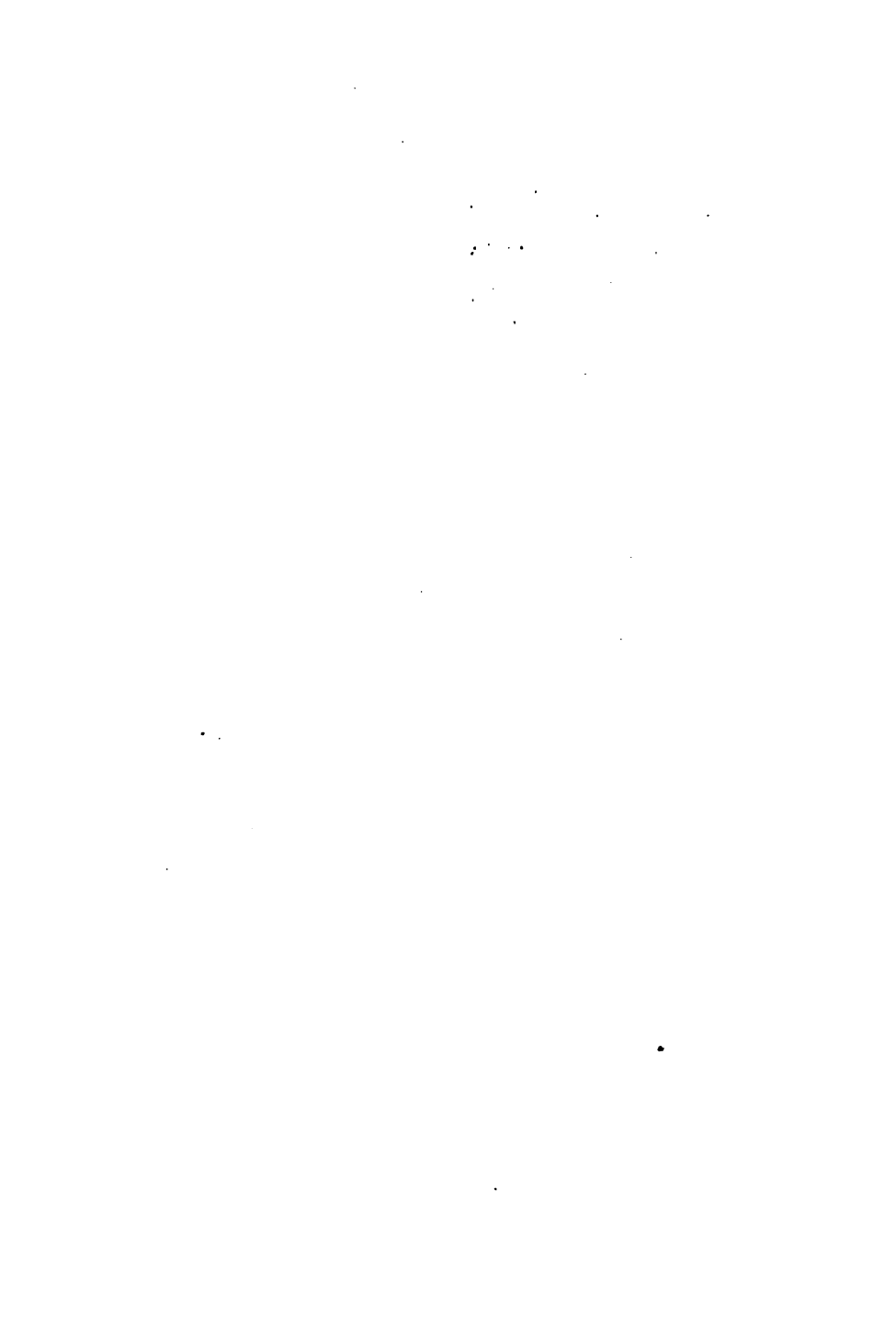
## RECEIPTS.

|                                 |            |          |                    |
|---------------------------------|------------|----------|--------------------|
| Balance brought from last year, | .          | .        | \$14,739 48        |
| Tolls received at Lock No. 1,   | \$6,694 79 |          |                    |
| Do.                             | 2,         | 1,659 51 |                    |
| Do.                             | 3,         | 739 05   |                    |
| Do.                             | 4,         | 3,028 05 |                    |
| First quarter,                  | .          | .        | 12,121 40          |
| Tolls received at Lock No. 1,   | 10,710 75  |          |                    |
| Do.                             | 2,         | 2,518 37 |                    |
| Do.                             | 3,         | 1,193 96 |                    |
| Do.                             | 4,         | 2,898 01 |                    |
| Second quarter,                 | .          | .        | 17,321 09          |
| Tolls received at Lock No. 1,   | 7,570 79   |          |                    |
| Do.                             | 2,         | 1,137 84 |                    |
| Do.                             | 3,         | 991 37   |                    |
| Do.                             | 4,         | 1,460 60 |                    |
| Third quarter,                  | .          | .        | 11,160 60          |
| Tolls received at Lock No. 1,   | 9,294 88   |          |                    |
| Do.                             | 2,         | 2,940 58 |                    |
| Do.                             | 3,         | 1,422 23 |                    |
| Do.                             | 4,         | 2,363 15 |                    |
| Fourth quarter,                 | .          | .        | 16,020 84          |
|                                 |            |          | <u>\$71,363 41</u> |

## DISBURSEMENTS.

|                                                                                       |          |           |
|---------------------------------------------------------------------------------------|----------|-----------|
| Jan. 1. Bonds paid and cancelled,                                                     | \$13,500 |           |
| Oct. 1. Do. " " "                                                                     | 16,000   |           |
| Total Bonds paid in 1848,                                                             | —        | 29,500 00 |
| Expenses for First Quarter,                                                           | 3,617 67 |           |
| Do. Second do.                                                                        | 1,689 83 |           |
| Do. Third do.                                                                         | 2,392 22 |           |
| Do. Fourth do.                                                                        | 1,845 95 |           |
| Total expenses for 1848,                                                              | —        | 9,545 67  |
| Repairs for First Quarter,                                                            | 1,513 52 |           |
| Do. Second do.                                                                        | 277 57   |           |
| Do. Third do.                                                                         | 954 14   |           |
| Do. Fourth do.                                                                        | 109 02   |           |
| Total Repairs for 1848,                                                               | —        | 2,854 25  |
| Interest for First Quarter,                                                           | 202 50   |           |
| Do. Second do.                                                                        | 5,949 25 |           |
| Do. Third do.                                                                         | 63 00    |           |
| Do. Fourth do.                                                                        | 7,336 92 |           |
| Total Interest in 1848,                                                               | —        | 13,551 67 |
| Damages paid N. J. Bigby,                                                             | 259 62   |           |
| Do. S. Speer,                                                                         | 600 00   |           |
| Do. P. Thomas,                                                                        | 250 00   |           |
|                                                                                       | —        | 1,109 62  |
| Old Debt, paid in 1848,                                                               |          | 1,000 00  |
| Mon. Nav. Co. stock purchased in settlement<br>with Thos. H. Baird,                   |          | 500 00    |
| Construction, paid Fenlon & Patton,                                                   |          | 240 25    |
| Balance carried to next year, of which<br>\$12,000 is applicable to payment of Bonds, |          | 13,061 95 |
|                                                                                       |          | <hr/>     |
|                                                                                       |          | 71,363 41 |

ATTEST: THOS. M. HOWE, Treasurer.



TENTH  
ANNUAL REPORT,  
OF THE  
PRESIDENT AND MANAGERS,  
TO THE  
MONONGAHELA NAVIGATION  
COMPANY;

**Presented January, 1850,**

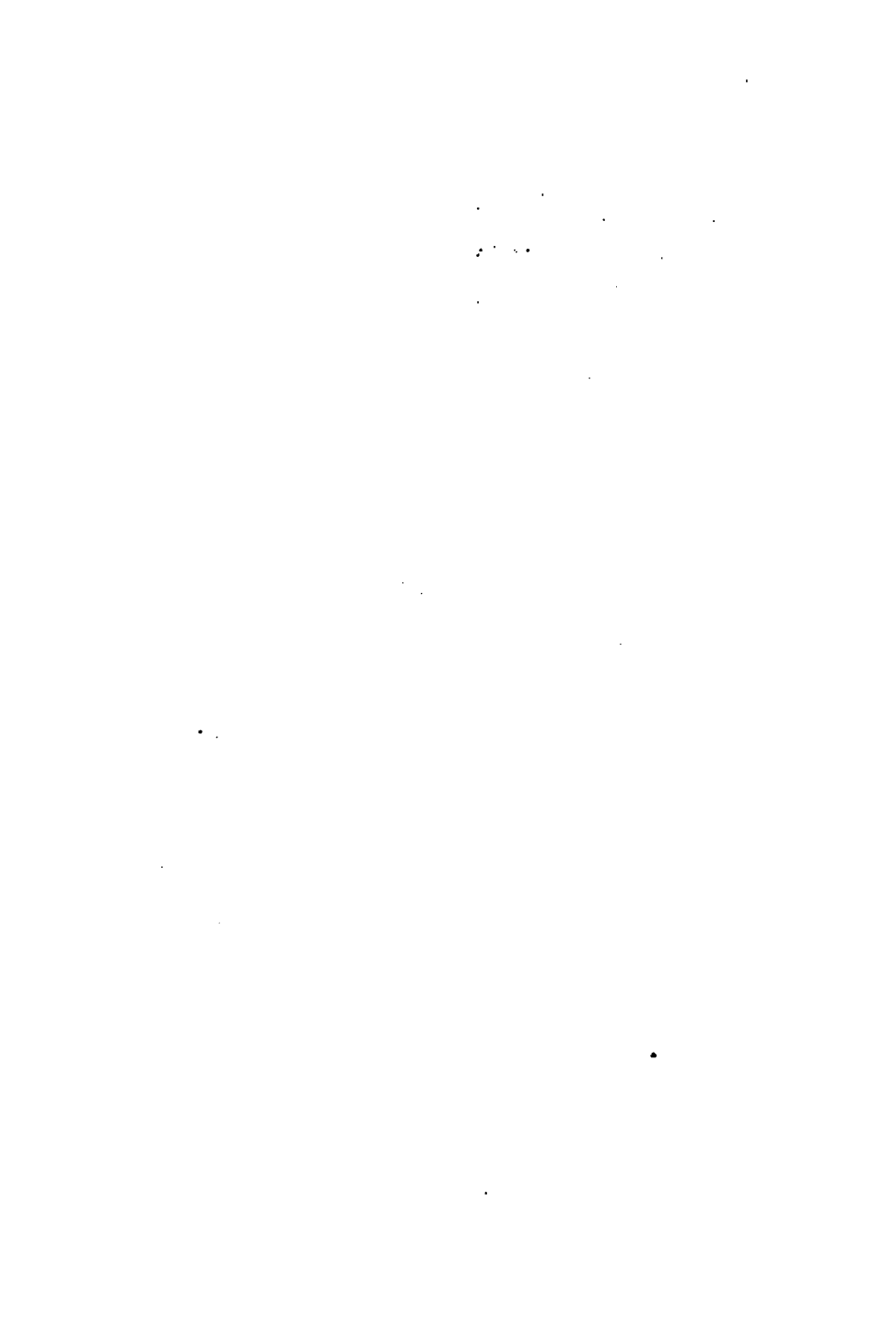
WITH THE  
ACCOMPANYING DOCUMENTS.

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PITTSBURGH:

PRINTED BY JOHNSTON & STOCKTON, CORNER OF MARKET & THIRD STS.

1850.



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1850.



# OFFICERS.

---

PRESIDENT—J. K. MOORHEAD.

TREASURER—THOMAS M. HOWE.

## MANAGERS:

JOHN ANDERSON,

THOMAS BAKEWELL,

GEORGE W. CASS,

NEVILLE B. CRAIG,

JOHN L. DAWSON,

WILLIAM EICHBAUM,

S. R. JOHNSTON,

WILSON M'CANDLESS,

JOHN TASSEY,

R. C. TOWNSEND.

SECRETARY—WM. BAKEWELL.

TO THE STOCKHOLDERS  
OF THE  
MONONGAHELA NAVIGATION COMPANY.

---

IN presenting the Tenth Annual Report, the Board can again congratulate the Stockholders upon the fact, that although there have been numerous high freshets in the river during the year, little damage has been done to the works, and they are now in good order; and with the exception of a few days in January and February last, while the river was closed by ice, it has been in navigable condition during the entire year; although, during the summer, when the water in the river was lower than at any period since the dry season of 1838, it ceased to flow over the dams, and fell in pools No. one and two more than a foot below the wiers. There was so little water in the river below dam No. one, that the Passenger Packets, although they could pass the new Lock freely, could not get to the city, for some weeks, yet they passed daily from that dam to Brownsville.

This extreme and long continued low water had a very unfavorable influence on our revenue, as, during that time, the Ohio river was so low that neither freight nor passengers could to any great extent be transported thereon. In addition to the low water, the prevalence of the Cholera along the Ohio river and throughout the western country generally, paralyzed business of all kinds, and almost entirely suspended travel; notwithstanding these unfavorable circumstances the toll received during the year has amounted to Fifty-three thousand seven hundred and fifty-six

dollars and thirty-two cents, being only twenty-eight hundred and seventy-seven dollars and sixty-one cents less than the receipts for the year 1848. In the last general report the Board adverted to the fact that the completion of other lines of improvement would divert a large amount of the trade and travel between the west and the Atlantic cities from the Monongahela route; this has been realized during the past year to a greater extent than was anticipated, as an examination of the statistics appended to this report will shew. The diminution in the number of through passengers is 12,461, making a difference in toll on that item of \$3,115 25, or \$237 64 more than the total reduction from the receipts of last year. Whilst this statement shows the loss the company sustained from that source, it is gratifying to know that the amount of toll received on coal, window glass, and the local trade generally, on which the company must eventually rely for revenue, has increased considerably.

In the last annual report, in speaking of applications having been made for a reduction of the toll on coal, the following reasons, (which we think it proper to reiterate here,) are given why such application in justice to the company should not be granted:

“The toll now levied upon coal, is greatly below that charged upon any other improvement in the Union, as will be shown by the following comparative statement, exhibiting the amount charged upon a boat load of 1000 bushels, transported fifty-six miles, on the following improvements respectively, viz:

|                                   | per 1000 bush, or per ton. |                                          |
|-----------------------------------|----------------------------|------------------------------------------|
| Pennsylvania Canal, - - -         | \$10,08                    | 28 $\frac{1}{4}$ cts.                    |
| Schuylkill Navigation, - - -      | 11,85                      | 33 “                                     |
| Tide Water Canal, - - -           | 9,92                       | 27 $\frac{77}{100}$ “                    |
| Erie Extension, - - -             | 7,84                       | 21 $\frac{95}{100}$ “                    |
| Penna. and Ohio Canal, - - -      | 10,24                      | 28 $\frac{67}{100}$ “                    |
| Muskingum Lock Nav. - - -         | 7,36                       | 20 $\frac{81}{100}$ “                    |
| Green, Barren and Kentucky rivers | 9,00                       | 25 $\frac{29}{100}$ “                    |
| <b>Monongahela Navigation,</b>    | <b>2,91!</b>               | <b>8<math>\frac{14}{100}</math> “!!!</b> |

The above statement discloses the fact that coal is carried the entire length of your improvement at less than 3 mills per bushel,

or a fraction over 8 cents per ton; and when it is considered that four-fifths of the labor and expenses of attending our Locks is chargeable to this item, and it pays less than one-fourth of the whole amount of tolls received upon the work, and that this trade has been not merely facilitated, but in point of fact almost *created* by the improvement, and that moreover, at no very distant day, in consequence of other lines of improvement which are now in process of construction, the company will be deprived of that fruitful source of revenue arising from the transit of passengers and merchandise between the east and west, and thrown upon its local trade for support, it is not reasonable, nor is it to be expected, that they should consent to abandon all hope of profit from that branch of business for which their work was in the first place principally designed. If they did, the necessary result would be, (in the event of the diversion of the through trade,) that the burthen of supporting this improvement, thus removed from the article of coal, would be thrown upon the agricultural and manufacturing labor of the Monongahela valley; and yet there is no interest which has profited to the same extent from its construction as that which is now sought to be exempted almost entirely from a fair contribution for its support. The owners of coal lands have been provided by it with a safe and convenient harbor for loading and keeping their boats, the market of Pittsburgh has been rendered accessible to them at all seasons of the year, and they are now enabled to reach the Ohio and avail themselves of the Allegheny floods, which heretofore ran idly by without a Monongahela keel to disturb their depths; and as a consequence of all this their lands have more than quadrupled in value! Well, therefore, may it be said in reply to their demands, that they are sufficiently favored already, instead of being entitled to an almost entire exemption, at the expense either of the company, or of the *agricultural* and *manufacturing* interests of the valley."

The Legislature, however, passed an act, dated 21st of March last, reducing the toll fifty per cent on pools 3 and 4 on coal in boats intending to pass down the Ohio river. This act, which is

appended to this report, was accepted by the Board, and the toll reduced in accordance therewith on the 24th of March, three days after its passage, although the toll was so low previously, that in the opinion of the Board there was neither justice nor propriety in asking the reduction; yet, as the act secures them against further annoyance from that source, and the reduction appears to satisfy the citizens generally, it was deemed proper to accept it. It reduces the toll on coal out of pool No. 4 from \$2,91 to 2,46½ per thousand bushels, making it less than seven cents per ton, or two and a half mills per bushel toll for fifty-six miles of Navigation !!!

We regret to add that the Youghiogheny Improvement which was to have been completed during the fall, and which it was believed would have added to the receipts of this company, is still in an unfinished state, and will probably not be in a navigable condition before next fall.

The prospect for an extension of our work to the Virginia State line, is not so favorable as we had reason to believe it would have been by this time. The citizens along the river above Brownsville, although anxious for the extension, have been very backward about subscribing stock, and as a large debt against the company (the details of which will be seen by an examination of the Treasurer's report herewith,) remains unpaid, we are unable to get stock subscribed in the city. There has been expended for repairs during the year \$4259,32; this sum was increased by the difficulty we had during the low water, in getting into the new Lock at No. 1: it became necessary to remove a large amount of clay and mud that had settled in above the head wall and was by the action of the water drawn into that Lock when the gates were opened, the removal of which was tedious and expensive. The result of the year's business is, however, gratifying to the Stockholders;—there has been thirty thousand and five hundred dollars of the coupon bonds liquidated, and fifteen hundred dollars paid on an outstanding note.

There has been nothing paid in the shape of damages during the past year, and although suits have been brought in two cases

in Washington county, and one case in Allegheny, yet, as it is so manifest that the owners of the property have been benefited and not injured by the construction of the navigation, that, although the company may suffer some expense in establishing this fact in the courts, yet we do not anticipate any further drafts upon our resources on this account.

The early completion of the central Pennsylvania Rail Road will, as has been anticipated, divert the travel and trade destined for the eastern cities from our improvement, but as the coal trade is rapidly increasing, and as the completion of the Rail Road from this city to Philadelphia will attract the trade and travel of the Monongahela valley to this point, we have no reason to anticipate a reduction of revenue.

Respectfully submitted,

J. K. MOORHEAD,

OFFICE MONONGAHELA NAV. Co. }  
PITTSBURGH, Jan. 7, 1850. }

*President.*

## A FURTHER SUPPLEMENT

TO THE ACT INCORPORATING THE

# MONONGAHELA NAVIGATION COMPANY.

---

SECTION 1. Be it enacted, by the Senate and House of Representatives of the Commonwealth of Pennsylvania in General Assembly met, and it is hereby enacted by the authority of the same: That from and after the passage of this act all rafts, flats and flatboats descending the river from any point more than three miles above Brownsville, and within the State of Pennsylvania, and not intending to return, shall not be subject to a higher toll than seventy-five cents per Lock, including cargo, until the company shall complete the first Dam above Brownsville: Provided, That no such craft shall take in any additional cargo on the line of the improvement, nor use or lie by in any of the harbors created by the improvement for a period of more than ten days, without being subject to the payment of the regular tolls.

SECTION 2. That the present rates of toll on coal shall be reduced by the company fifty per cent, on pools No. three and four, on all coal carried in flatboats, intended to pass down the Ohio river; and in consideration thereof, the Legislature shall not further reduce the tolls until the present indebtedness of the company shall have been fully paid and a dividend of eight per cent. per annum paid to the Stockholders, and no reduction shall be made at any time so as to afford a less dividend than eight per cent. per annum on the capital stock: Provided, That the terms of this act shall not be so construed as to affect or alter the provi-

sions of the act passed in the year one thousand eight hundred and forty-eight, requiring the company to pay one half the dividends above ten per cent. per annum, into the Treasury of the Commonwealth.

SECTION 3. That so much of any act or acts to which this is a supplement as are hereby altered or amended, shall be and the same are hereby repealed.

SECTION 4. The Legislature reserves the right to alter or amend the Charter of said company, at any time hereafter, should they violate, abuse or misuse the privileges granted, and such fact be previously found by the verdict of a jury, and the judgment of the proper court thereon, under a writ of scire facias issued against them at the suit of any individual or individuals who may be aggrieved.

WILLIAM F. PACKER,

Speaker of the House of Representatives.

GEORGE DARSIE,

Speaker of the Senate.

Approved the twenty-first day of March, A. D. one thousand eight hundred and forty-nine.

WM. F. JOHNSTON.



## STATEMENT

*Of the Business on the Monongahela Slackwater during the  
Year 1849, ending December 31st.*

|                        |   |   |          |             |
|------------------------|---|---|----------|-------------|
| Receipts from Freight, | - | - | \$24,875 | 09          |
| “ “ Coal,              | - | - | 13,533   | 39          |
| “ “ Passengers,        | - | - | 15,337   | 84½         |
| Total                  | - | - | —————    | \$53,746 32 |

*Receipts at the Several Locks.*

|                  |   |   |   |          |             |
|------------------|---|---|---|----------|-------------|
| Lock No. 1,      | - | - | - | \$30,396 | 06          |
| “ No. 2,         | - | - | - | 10,009   | 25          |
| “ No. 3,         | - | - | - | 4,114    | 84          |
| “ No. 4,         | - | - | - | 9,226    | 17          |
| Total, as above, | - | - | - | —————    | \$53,746 32 |

*Trade of Pool No. 1 both ways.*

|                             |   |   |   |   |       |
|-----------------------------|---|---|---|---|-------|
| Tow Boats,                  | - | - | - | - | 2,104 |
| Flats,                      | - | - | - | - | 5,063 |
| No. of clearances Eastward, | - | - | - | - | 2,155 |
| “ “ Westward,               | - | - | - | - | 2,841 |

*Passenger Returns of the Boats running on the Monongahela  
Slack Water for the year 1849.*

| BOATS.                   | PASSENGERS,    |               | No. of Locks. | TOLLS.            |
|--------------------------|----------------|---------------|---------------|-------------------|
|                          | Through,       | Way,          |               |                   |
| Atlantic, - - -          | 11,368½        | 15,535        | 25,336        | \$4,615 64½       |
| Baltic, - - -            | 10,853         | 8,010         | 14,358        | 3,718 31          |
| Louis M' Lane, - - -     | 12,527         | 11,533        | 21,170        | 4,613 65          |
| Fashion No. 2, - - -     | -----          | 1,697         | 2,915         | 204 05            |
| Camden, - - -            | -----          | 7,468         | 10,443        | 731 01            |
| Ariadne, - - -           | 133            | 87            | 156           | 44 17             |
| Peytona, - - -           | -----          | 1,517         | 2,095         | 146 65            |
| Star, - - -              | -----          | 958           | 1,387         | 97 09             |
| Chieftain, - - -         | -----          | 3,620         | 6,246         | 437 22            |
| Arrow, - - -             | -----          | 251           | 456           | 31 92             |
| Globe, - - -             | 48             | 65            | 138           | 21 66             |
| Transient Boats, - - -   | 78             | 773           | 1,016         | 90 62             |
| Phillip Doddridge, - - - | 82             | 175           | 399           | 48 43             |
| Elite, - - -             | 61             | 58            | 110           | 22 95             |
| Viroqua, - - -           | -----          | 1,796         | 3,121         | 218 47            |
| Robt. Wightman, - - -    | 8              | 2,461         | 4,200         | 296 00            |
| <b>Total, - - -</b>      | <b>35,158½</b> | <b>56,004</b> | <b>93,546</b> | <b>15,337 84½</b> |

|                             |                |
|-----------------------------|----------------|
| Through Passengers, - - - - | 35,158½        |
| Way do. - - - -             | 56,004         |
| <b>Total, - - - -</b>       | <b>91,162½</b> |

*Passenger business in 1848 and 1849 compared.*

|                               | 1848.               | 1849.             | Decrease & inc. in 1849. |
|-------------------------------|---------------------|-------------------|--------------------------|
| Through Passengers,           | 47,619½             | 35,158½           | 12,461                   |
| Way do.                       | 51,739              | 56,004            | 4,265                    |
| Toll on Thro' Passengers,     | \$11,904 87½        | 8,789 62½         | 3,115 25                 |
| Toll on Way Passengers,       | 6,366 92            | 6,548 22          | 181 30                   |
| <b>Total Passenger Tolls,</b> | <b>\$18,271 79½</b> | <b>15,337 84½</b> | <b>\$2,933 95</b>        |

STATEMENT OF THE AFFAIRS OF THE  
**MONONGAHELA NAVIGATION COMPANY,**

**December 31st, 1849.**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Construction, - - - - - 494,279 28<br/>           Additional Lock at No. 1. - - - 56,800 00<br/>           Damages, - - - - - 6,795 80<br/>           Cash, - - - - - 734 00<br/>           do. in hands Moorhead, Robert-<br/>               son &amp; Co. - - - - - 17,400 36<br/>           Bills Receivable, - - - - - 50 00<br/>           Stock Monongahela Nav. Co. - - - 15,600 00<br/>           Stock Youngslough Nav. Co. - - - 4,000 00<br/>           Wm. Forsyth of Eli, - - - - - 6 60<br/>           Increased Capital Stock authorized<br/>             by Act of Assembly, Feb. 9 1848, 260,600 00<br/>           Credit on same, - - - - - 83,392 00</p> | <p>Capital Stock, - - - - - 521,200 00<br/>           Bonds outstanding as under:<br/>             Mortgage Bonds issued to Moorhead,<br/>               Robertson &amp; Co. - - - 178,000 00<br/>             Bonds issued to Allstons &amp; Hannay,<br/>               in payment of additional Lock at<br/>               No. 1. - - - - - 56,800 00<br/>             Bond to James Tustin - - - - - 2,000 00<br/>               ----- 236,800 00<br/>             Bills Payable, - - - - - 1,500 00<br/>             Warrants outstanding, - - - - - 14 00<br/>             Profit and Loss, - - - - - 13,360 04<br/>               -----<br/>               \$772,874 04</p> |
| <p>Attest:—<br/> <b>THOMAS M. HOWE, Treasurer.</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

PITTSBURGH, Jan. 7, 1850.

At a meeting of the Stockholders of the Monongahela Navigation Company, held this day, the following gentlemen were elected Officers and Managers for the year 1850:—

PRESIDENT—J. K. MOORHEAD.

TREASURER—THOMAS M. HOWE.

MANAGERS.

|                   |                    |
|-------------------|--------------------|
| JOHN ANDERSON     | WILLIAM EICHBAUM,  |
| THOMAS BAKEWELL,  | S. R. JOHNSTON,    |
| GEORGE W. CASS,   | WILSON M'CANDLESS, |
| NEVILLE B. CRAIG, | JOHN TASSEY,       |
| JOHN L. DAWSON,   | R. C. TOWNSEND.    |

SECRETARY—WM. BAKEWELL.

COMMITTEES FOR THE YEAR 1850.

ON CLAIMS AND ACCOUNTS.

|                    |                 |
|--------------------|-----------------|
| WILLIAM EICHBAUM,  | JOHN TASSEY,    |
| WILSON M'CANDLESS, | JOHN L. DAWSON. |

ON REPAIRS.

|                 |                 |
|-----------------|-----------------|
| JOHN ANDERSON,  | N. B. CRAIG,    |
| R. C. TOWNSEND, | GEORGE W. CASS. |

ON TOLLS.

|                  |                |
|------------------|----------------|
| THOMAS BAKEWELL, | JOHN ANDERSON, |
| S. J. JOHNSTON,  | N. B. CRAIG.   |

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry, no matter how small, should be recorded to ensure the integrity of the financial data. This includes not only sales and purchases but also expenses and income. The document provides a detailed list of items that should be tracked, such as inventory levels, customer orders, and supplier invoices. It also outlines the procedures for recording these transactions, including the use of specific forms and the assignment of responsibilities to different staff members.

The second part of the document focuses on the analysis of the recorded data. It describes various methods for identifying trends and anomalies in the financial performance. This includes comparing current data with historical trends, analyzing seasonal fluctuations, and identifying areas where costs are higher than expected. The document also discusses the importance of regular reviews and reports to management, providing a clear and concise summary of the financial situation. It includes a sample report format and a checklist of items to be included in each report.

The final part of the document addresses the overall financial health of the organization. It discusses the impact of the recorded data on the company's profitability and the ability to meet its financial obligations. It also provides recommendations for improving financial management practices, such as implementing tighter controls over expenses and improving the accuracy of the recording process. The document concludes with a summary of the key points and a call to action for all staff members to adhere to the established procedures.





ELEVENTH  
ANNUAL REPORT,  
OF THE  
PRESIDENT AND MANAGERS,  
TO THE  
MONONGAHELA NAVIGATION  
COMPANY;

**Presented January, 1851,**

WITH THE  
ACCOMPANYING DOCUMENTS.

PITTSBURGH:

PRINTED BY W. S. HAVEN, CORNER OF MARKET AND SECOND STREETS.

1851



PITTSBURGH, Jan. 6, 1851.

At a meeting of the Stockholders of the Monongahela Navigation Company, held this day, the following gentlemen were elected Officers and Managers for the year 1851 :

PRESIDENT—J. K. MOORHEAD.

TREASURER—THOMAS M. HOWE.

**MANAGERS:**

|                   |                    |
|-------------------|--------------------|
| JOHN ANDERSON,    | WILLIAM EICHBAUM,  |
| THOMAS BAKEWELL,  | S. R. JOHNSTON,    |
| GEORGE W. CASS,   | WILSON M'CANDLESS, |
| NEVILLE B. CRAIG, | JOHN TASSEY,       |
| JOHN L. DAWSON,   | R. C. TOWNSEND.    |

SECRETARY—WM. BAKEWELL.

-----  
**COMMITTEES FOR THE YEAR 1851.**

**ON CLAIMS AND ACCOUNTS.**

|                    |                 |
|--------------------|-----------------|
| WILLIAM EICHBAUM,  | JOHN TASSEY.    |
| WILSON M'CANDLESS, | JOHN L. DAWSON. |

**ON REPAIRS.**

|                 |                 |
|-----------------|-----------------|
| JOHN ANDERSON,  | N. B. CRAIG.    |
| R. C. TOWNSEND, | GEORGE W. CASS. |

**ON TOLLS.**

|                  |                |
|------------------|----------------|
| THOMAS BAKEWELL, | JOHN ANDERSON. |
| S. R. JOHNSTON,  | N. B. CRAIG    |

TO THE STOCKHOLDERS  
OF THE  
MONONGAHELA NAVIGATION COMPANY.

---

On the third day of November, 1844, your Navigation was completed, and the locks opened for the passage of boats; and during the period that has elapsed of more than six years, it has been subjected to the severest tests of floods and ice without suffering any material injury, or requiring any extraordinary repairs, and is now in good order, thus giving the strongest demonstration of the strength and durability of the work.

This improvement, although prosecuted under circumstances of great embarrassment, has been eminently successful, and the original stockholders, who subscribed and paid their money ten years ago, without receiving any return, may now begin to look forward to a period when the indebtedness of the company will be extinguished, and the earnings of their own money divided semi-annually amongst them.

The increase of business has been regular and gradual, with the exception of the year 1849, during which the cholera prevailed on the western waters, so as to paralyze trade, and the tolls fell below that of the two former years.

The amount of toll collected during the six years since the completion of the work, is as follows, viz:

|                    |             |
|--------------------|-------------|
| For the year 1845, | \$28,579 70 |
| “ “ “ 1846,        | 43,422 39   |
| “ “ “ 1847,        | 54,261 90   |
| “ “ “ 1848,        | 56,623 93   |
| “ “ “ 1849,        | 53,756 32   |
| “ “ “ 1850,        | 64,318 31   |

STATEMENT OF THE AFFAIRS OF THE  
**MONONGAHELA NAVIGATION COMPANY,**

December 31st, 1849.

|                                             |              |  |                                    |              |
|---------------------------------------------|--------------|--|------------------------------------|--------------|
| Construction, . . . . .                     | 494,279 28   |  | Capital Stock, . . . . .           | 521,200 00   |
| Additional Lock at No. 1. . . . .           | 56,800 00    |  | Bonds outstanding as under:        |              |
| Damages, . . . . .                          | - 6,795 80   |  | Mortgage Bonds issued to Moorhead, |              |
|                                             | - 557,875 08 |  | Robertson & Co. . . . .            | 178,000 00   |
| Cash, . . . . .                             | 734 00       |  | Bonds issued to Allstons & Hannay, |              |
| do. in hands Moorhead, Robert-              | - 17,400 36  |  | in payment of additional Lock at   |              |
| son & Co. . . . .                           | - 18,134 36  |  | No. 1. . . . .                     | 56,800 00    |
|                                             | - 50 00      |  | Bond to James Tustin . . . . .     | 2,000 00     |
| Bills Receivable, . . . . .                 | 15,600 00    |  |                                    | - 236,800 00 |
| Stock Monongahela Nav. Co. . . . .          | 4,000 00     |  | Bills Payable, . . . . .           | 1,500 00     |
| Stock Youngsborough Nav. Co. . . . .        | 6 60         |  | Warrants outstanding, . . . . .    | 14 00        |
| Wm. Forsyth of Eli, . . . . .               | - 177,208 00 |  | Profit and Loss, . . . . .         | 13,360 04    |
| Increased Capital Stock authorized          |              |  |                                    | - 772,874 04 |
| by Act of Assembly, Feb. 9 1848, 260,600 00 |              |  | ARREST--                           |              |
| Credit on same, . . . . .                   | 83,392 00    |  | THOMAS M. HOWE, Treasurer.         |              |
|                                             | - 177,208 00 |  |                                    |              |
|                                             | - 772,874 04 |  |                                    |              |

PITTSBURGH, Jan. 7, 1850.

At a meeting of the Stockholders of the Monongahela Navigation Company, held this day, the following gentlemen were elected Officers and Managers for the year 1850:—

PRESIDENT—J. K. MOORHEAD.

TREASURER—THOMAS M. HOWE.

MANAGERS.

|                   |                    |
|-------------------|--------------------|
| JOHN ANDERSON     | WILLIAM EICHBAUM,  |
| THOMAS BAKEWELL,  | S. R. JOHNSTON,    |
| GEORGE W. CASS,   | WILSON M'CANDLESS, |
| NEVILLE B. CRAIG, | JOHN TASSEY,       |
| JOHN L. DAWSON,   | R. C. TOWNSEND.    |

SECRETARY—WM. BAKEWELL.

COMMITTEES FOR THE YEAR 1850.

ON CLAIMS AND ACCOUNTS.

|                    |                 |
|--------------------|-----------------|
| WILLIAM EICHBAUM,  | JOHN TASSEY,    |
| WILSON M'CANDLESS, | JOHN L. DAWSON. |

ON REPAIRS.

|                 |                 |
|-----------------|-----------------|
| JOHN ANDERSON,  | N. B. CRAIG,    |
| R. C. TOWNSEND, | GEORGE W. CASS. |

ON TOLLS.

|                  |                |
|------------------|----------------|
| THOMAS BAKEWELL, | JOHN ANDERSON, |
| S. J. JOHNSTON,  | N. B. CRAIG.   |

## STATEMENT

*Of Freight shipped both ways on the Monongahela Slack  
Water, during the year 1849.*

| Shipped Eastward from Pittsburgh. |       |            | Arrived Westward at Pittsburgh. |          |            |
|-----------------------------------|-------|------------|---------------------------------|----------|------------|
| Flour,                            | bbls. | 1,317      | Lime,                           | bushels, | 12,081     |
| Salt,                             | do.   | 11,416     | Wheat,                          | "        | 3,281      |
| Empty                             | do.   | 7,674      | Sand,                           | "        | 89,620     |
| Whiskey,                          | do.   | 3,895      | Oats, &c.                       | "        | 51,874     |
| Apples,                           | do.   | 773        | Potatoes,                       | "        | 630        |
| Potatoes,                         | bush. | 4,250      | Flour,                          | barrels. | 54,599     |
| Boards,                           | feet  | 4,306,738  | Whiskey,                        | "        | 3,796      |
| Timber,                           | do.   | 393,894    | Salt,                           | "        | 1,748      |
| Pig Iron,                         | tons, | 1,716      | Apples,                         | "        | 15,021     |
| Copper Ore,                       | do.   | 992        | Empty,                          | "        | 2,398      |
| Shingles,                         | No.   | 2,532,500  | Cider,                          | "        | 150        |
| Hoop Poles,                       | "     | 8,775      | Iron Ore,                       | tons,    | 150        |
| Lath,                             | "     | 351,500    | Pig Iron,                       | "        | 177½       |
| Brick,                            | "     | 133,545    | Hay,                            | "        | 108        |
| Carriages,                        | "     | 23         | Wood,                           | cords,   | 164        |
| Wagons,                           | "     | 63         | Stone,                          | perches, | 3,228      |
| Horses,                           | "     | 65         | Posts,                          | No.      | 220        |
| Hogs,                             | "     | 13         | Staves,                         | "        | 35,350     |
| Staves,                           | "     | 2,200      | Hoop Poles,                     | "        | 42,950     |
| *D'd fruit & seed, lbs.           |       | 241,354    | Lath,                           | "        | 2,500      |
| *Tobacco Leaf,                    | "     | 342,106    | Brick,                          | "        | 2,074,000  |
| *Butter, lard & cheese,           |       | 559,338    | Carriages,                      | "        | 37         |
| *Ginseng & beeswax,               |       | 9,065      | Wagons,                         | "        | 58         |
| *Wool & feathers, lbs.            |       | 102,159    | Horses,                         | "        | 83         |
| *Bacon & Pork, lbs.               |       | 1,532,272  | Hogs,                           | "        | 476        |
|                                   |       |            | Steam Boat Hulls,               |          | 27         |
| Total lbs. classed ft.            |       | 18,461,143 | Window Glass, boxes,            |          | 72,752     |
|                                   |       |            | Boards,                         | feet,    | 410,322    |
|                                   |       |            | Timber,                         | "        | 89,525     |
|                                   |       |            | Iron,                           | lbs.     | 159,504    |
|                                   |       |            | Nails,                          | "        | 1,387,400  |
|                                   |       |            | Eastern mdze.                   | "        | 5,976,968  |
|                                   |       |            | Total lbs. classed ft.          |          | 11,023,969 |

\*For Eastern Markets.

## STATEMENT OF COAL SHIPPED

*In the several Pools of the Monongahela Slack Water, during the year 1849.*

| Months.   | Pool No. 1. | Pool No. 2. | Pool No. 3. | P'l. No. 4. | Total.    |
|-----------|-------------|-------------|-------------|-------------|-----------|
|           | BUSHEL.     | BUSHEL.     | BUSHEL.     | BUSHEL.     | BUSHEL.   |
| January,  | 67,200      | 51,490      | 33,750      | 12,231      | 164,671   |
| February, | 89,300      | 58,250      | 20,500      | 5,700       | 173,750   |
| March,    | 342,200     | 591,905     | 158,695     | 149,247     | 1,242,047 |
| April,    | 312,000     | 577,267     | 135,488     | 205,226     | 1,229,981 |
| May,      | 275,000     | 497,760     | 124,890     | 51,070      | 948,720   |
| June,     | 286,400     | 434,536     | 136,896     | 29,701      | 887,533   |
| July,     | 124,800     | 20,000      | 31,280      | 2,800       | 178,880   |
| August,   | 60,100      | 7,100       | 35,000      | 5,000       | 107,200   |
| Sept.     | 145,500     | 11,300      | 80,400      | 11,000      | 248,200   |
| October,  | 484,400     | 584,000     | 274,452     | 74,858      | 1,417,710 |
| Novem.    | 433,200     | 944,613     | 241,855     | 316,260     | 1,935,928 |
| Decem.    | 323,944     | 642,126     | 161,517     | 46,300      | 1,173,887 |
| Total,    | 2,944,044   | 4,420,347   | 1,434,723   | 909,393     | 9,708,507 |

## RECAPITULATION.

| POOLS.     | Bushels in Flats. | Bushels in Boats. | TOLLS.      |
|------------|-------------------|-------------------|-------------|
| No. 1..... | 2,111,100         | 832,944           | \$2,068 42  |
| No. 2..... | 183,400           | 4,236,947         | 7,284 11    |
| No. 3..... | 869,800           | 564,923           | 2,701 09    |
| No. 4..... | 214,300           | 695,093           | 1,479 77    |
| Total,     | 3,378,600         | 6,329,907         | \$13,533 39 |

## MOORHEAD, ROBERTSON &amp; CO.

(MORTGAGEES,)

*In account with the Monongahela Navigation Company, for  
Receipts and Disbursements for the year A. D. 1849.*

## RECEIPTS.

|                                    |            |                    |
|------------------------------------|------------|--------------------|
| To Balance brought from last year, |            | \$13,061 95        |
| Tolls received at Lock No. 1,      | \$6,069 25 |                    |
| Do. 2,                             | 2,116 76   |                    |
| Do. 3,                             | 727 10     |                    |
| Do. 4,                             | 3,024 10   |                    |
| First quarter,                     |            | <u>11,997 21</u>   |
| Tolls received at Lock No. 1,      | 9,277 81   |                    |
| Do. 2,                             | 3,068 39   |                    |
| Do. 3,                             | 1,283 99   |                    |
| Do. 4,                             | 2,781 38   |                    |
| Second quarter,                    |            | <u>16,411 57</u>   |
| Tolls received at Lock No. 1,      | 5,123 87   |                    |
| Do. 2,                             | 506 08     |                    |
| Do. 3,                             | 563 59     |                    |
| Do. 4,                             | 924 41     |                    |
| Third quarter,                     |            | <u>7,117 95</u>    |
| Tolls received at Lock No. 1,      | 9,925 18   |                    |
| Do. 2,                             | 4,239 62   |                    |
| Do. 3,                             | 1,540 16   |                    |
| Do. 4,                             | 2,514 68   |                    |
| Fourth quarter,                    |            | <u>18,219 59</u>   |
| Received for rent,                 |            | 188 00             |
| Do. sale of old Iron,              |            | 101 37             |
|                                    |            | <u>\$67,097 64</u> |

## DISBURSEMENTS,

|                                                                                     |          |             |
|-------------------------------------------------------------------------------------|----------|-------------|
| Jan. 1. Bonds paid and cancelled,                                                   | 12,000   |             |
| July 1. Do. " " "                                                                   | 12,000   |             |
| Total amount of Bonds paid in 1849,                                                 | —————    | \$24,000 00 |
| Expenses for First Quarter,                                                         | 3,031 39 |             |
| Do. Second do.                                                                      | 1,410 83 |             |
| Do. Third do.                                                                       | 1,523 97 |             |
| Do. Fourth do.                                                                      | 3,511 27 |             |
| Total expenses for 1849,                                                            | —————    | 9,477 46    |
| Repairs for First Quarter,                                                          | 177 75   |             |
| Do. Second do.                                                                      | 164 23   |             |
| Do. Third do.                                                                       | 3,487 39 |             |
| Do. Fourth do.                                                                      | 429 95   |             |
| Total Repairs for 1849,                                                             | —————    | 4,259 32    |
| Interest for First Quarter,                                                         | 231.67   |             |
| Do. Second do.                                                                      | 5,772 33 |             |
| Do. Third do.                                                                       | 211 50   |             |
| Do. Fourth do.                                                                      | 4,245 00 |             |
| Total Interest paid in 1849,                                                        | —————    | 10,460 50   |
| Old debt paid to Bank of Pittsburgh,                                                |          | 1,500 00    |
| Balance carried to next year, all of which is appropriated to the payment of Bonds, |          | 17,400 36   |
|                                                                                     |          | —————       |
|                                                                                     |          | \$67,097 64 |

ATTEST: THOS. M. HOWE, Treasurer.



PITTSBURGH, Jan. 6, 1851.

At a meeting of the Stockholders of the Monongahela Navigation Company, held this day, the following gentlemen were elected Officers and Managers for the year 1851 :

PRESIDENT—J. K. MOORHEAD.

TREASURER—THOMAS M. HOWE.

MANAGERS:

|                   |                    |
|-------------------|--------------------|
| JOHN ANDERSON,    | WILLIAM EICHBAUM,  |
| THOMAS BAKEWELL,  | S. R. JOHNSTON,    |
| GEORGE W. CASS,   | WILSON M'CANDLESS, |
| NEVILLE B. CRAIG, | JOHN TASSEY,       |
| JOHN L. DAWSON,   | R. C. TOWNSEND.    |

SECRETARY—WM. BAKEWELL.

-----  
COMMITTEES FOR THE YEAR 1851.

ON CLAIMS AND ACCOUNTS.

|                    |                 |
|--------------------|-----------------|
| WILLIAM EICHBAUM,  | JOHN TASSEY.    |
| WILSON M'CANDLESS, | JOHN L. DAWSON. |

ON REPAIRS.

|                 |                 |
|-----------------|-----------------|
| JOHN ANDERSON,  | N. B. CRAIG.    |
| R. C. TOWNSEND, | GEORGE W. CASS. |

ON TOLLS.

|                  |                |
|------------------|----------------|
| THOMAS BAKEWELL, | JOHN ANDERSON. |
| S. R. JOHNSTON,  | N. B. CRAIG    |

TO THE STOCKHOLDERS  
OF THE  
MONONGAHELA NAVIGATION COMPANY.

---

On the third day of November, 1844, your Navigation was completed, and the locks opened for the passage of boats; and during the period that has elapsed of more than six years, it has been subjected to the severest tests of floods and ice without suffering any material injury, or requiring any extraordinary repairs, and is now in good order, thus giving the strongest demonstration of the strength and durability of the work.

This improvement, although prosecuted under circumstances of great embarrassment, has been eminently successful, and the original stockholders, who subscribed and paid their money ten years ago, without receiving any return, may now begin to look forward to a period when the indebtedness of the company will be extinguished, and the earnings of their own money divided semi-annually amongst them.

The increase of business has been regular and gradual, with the exception of the year 1849, during which the cholera prevailed on the western waters, so as to paralyze trade, and the tolls fell below that of the two former years.

The amount of toll collected during the six years since the completion of the work, is as follows, viz:

|                    |             |
|--------------------|-------------|
| For the year 1845, | \$28,579 70 |
| “ “ “ 1846,        | 43,422 39   |
| “ “ “ 1847,        | 54,261 90   |
| “ “ “ 1848,        | 56,623 93   |
| “ “ “ 1849,        | 53,756 32   |
| “ “ “ 1850,        | 64,318 31   |

To exhibit more clearly the practical success of the Improvement, the following comparative statement is given of several of the staple productions of the valley, and the travel passing over it in 1845, the first year after its completion, and the year 1850, viz:

|                     | 1845.       | 1850.       | Increase.   |
|---------------------|-------------|-------------|-------------|
| Through Passengers, | 22,726      | 38,988½     | 16,262½     |
| Way Passengers,     | 20,075      | 77,351      | 57,276      |
| *Flour, No. bbls.,  | 28,396      | 40,762      | 12,366      |
| Glass, " boxes,     | 47,331      | 84,911      | 37,580      |
| Salt, " bbls.,      | 7,929       | 16,501      | 8,572       |
| Brick,              | 760,100     | 1,132,400   | 372,300     |
| Boards, feet,       | 1,124,115   | 5,470,167   | 4,346,052   |
| Shingles,           | 347,000     | 1,798,750   | 1,451,750   |
| Coal, bushels,      | 4,605,185   | 12,297,967  | 7,692,782   |
| Total toll,         | \$28,579 70 | \$64,318 31 | \$35,738 61 |

It will be seen from the foregoing statement, that the increase in the articles named is from fifty to four hundred per cent., and the amount of toll has increased one hundred and twenty-five per cent.

During the last session of the Legislature, petitions were again presented praying for a reduction of toll on coal, and indeed asking an entire exemption upon boats loaded for the Southern or Western markets. The Board directed a remonstrance to be forwarded, setting forth the injustice and impropriety of granting the prayer of the petitioners, which, together with the petitions, were referred to the Judiciary Committee, and in March last, they reported *against* it. The remonstrance and report of the Committee, are appended to this Report.

We trust, therefore, that this fruitful source of annoyance is at an end, and that there will be no further attempts to disturb our present low rate of tolls.

There are still two or three claims for damages pending against the Company, although it is very generally admitted, that the

\*The quantity of Flour in 1847, '48 and '49 exceeds 1850.

value of all land laying adjacent to the river, has been enhanced by the construction of the Improvement. Such was the opinion of a very intelligent set of viewers, who, in October last, examined the two cases in Washington County, referred to in the last Annual Report. The claim, in one case, was for "washing and undermining the banks, and overflowing the land." In the other, for "washing and undermining the banks, causing them to slip." The award in both cases was, that the advantages derived from the Navigation exceed any damage done.

The Youghiogeny Navigation is completed to West Newton, a point eighteen miles above its mouth at M'Keesport; and from the amount of business doing on it, promises well. As the trade of this river passes through our two lower locks, we may expect an increase of tolls from this source.

It has been feared by many friends of this Improvement, that the opening of the Pennsylvania Railroad, to Philadelphia, will materially reduce its tolls. Such fear we think entirely groundless, as the through travel and trade, now passing over the Monongahela, that may be diverted to the Railroad, form but a small portion of our business, and pay but a fraction of the amount of tolls received. During the past year, the whole number of stage passengers was eighteen thousand three hundred and seventy-nine, whilst the number of through passengers on the river was 38,988½, and the way passengers 77,351.

|                                         |          |
|-----------------------------------------|----------|
| The toll collected on stage passengers, | 4,594 75 |
| “ “ “ “ Eastern Merchandise,            | 3,529 99 |
| Western Produce shipped East,           | 728 17   |

---

Making a total of *only* \$8,852 91

Should this whole amount be withdrawn, it would not materially affect the receipts of the Company, being but little over one eighth of the whole amount. But as the completion of the Railroad will greatly increase the local trade and travel of the valley of the Monongahela, it will, in this way, add more to our business than will be diverted from it.

The Monongahela river passes through a valley upwards of



ELEVENTH  
ANNUAL REPORT,  
OF THE  
PRESIDENT AND MANAGERS,  
TO THE  
MONONGAHELA NAVIGATION  
COMPANY;

**Presented January, 1851,**

WITH THE  
ACCOMPANYING DOCUMENTS.

PITTSBURGH:

PRINTED BY W. E. HAVEN, CORNER OF MARKET AND SECOND STREETS.

1851

PITTSBURGH, Jan. 6, 1851.

At a meeting of the Stockholders of the Monongahela Navigation Company, held this day, the following gentlemen were elected Officers and Managers for the year 1851 :

PRESIDENT—J. K. MOORHEAD.

TREASURER—THOMAS M. HOWE.

**MANAGERS:**

|                   |                    |
|-------------------|--------------------|
| JOHN ANDERSON,    | WILLIAM EICHBAUM,  |
| THOMAS BAKEWELL,  | S. R. JOHNSTON,    |
| GEORGE W. CASS,   | WILSON M'CANDLESS, |
| NEVILLE B. CRAIG, | JOHN TASSEY,       |
| JOHN L. DAWSON,   | R. C. TOWNSEND.    |

SECRETARY—WM. BAKEWELL.

-----  
**COMMITTEES FOR THE YEAR 1851.**

**ON CLAIMS AND ACCOUNTS.**

|                    |                 |
|--------------------|-----------------|
| WILLIAM EICHBAUM,  | JOHN TASSEY.    |
| WILSON M'CANDLESS, | JOHN L. DAWSON. |

**ON REPAIRS.**

|                 |                 |
|-----------------|-----------------|
| JOHN ANDERSON,  | N. B. CRAIG.    |
| R. C. TOWNSEND, | GEORGE W. CASS. |

**ON TOLLS.**

|                  |                |
|------------------|----------------|
| THOMAS BAKEWELL, | JOHN ANDERSON. |
| S. R. JOHNSTON,  | N. B. CRAIG    |

TO THE STOCKHOLDERS  
OF THE  
MONONGAHELA NAVIGATION COMPANY.

---

On the third day of November, 1844, your Navigation was completed, and the locks opened for the passage of boats; and during the period that has elapsed of more than six years, it has been subjected to the severest tests of floods and ice without suffering any material injury, or requiring any extraordinary repairs, and is now in good order, thus giving the strongest demonstration of the strength and durability of the work.

This improvement, although prosecuted under circumstances of great embarrassment, has been eminently successful, and the original stockholders, who subscribed and paid their money ten years ago, without receiving any return, may now begin to look forward to a period when the indebtedness of the company will be extinguished, and the earnings of their own money divided semi-annually amongst them.

The increase of business has been regular and gradual, with the exception of the year 1849, during which the cholera prevailed on the western waters, so as to paralyze trade, and the tolls fell below that of the two former years.

The amount of toll collected during the six years since the completion of the work, is as follows, viz:

|              |       |       |             |
|--------------|-------|-------|-------------|
| For the year | 1845, |       | \$28,579 70 |
| " "          | " "   | 1846, | 43,422 39   |
| " "          | " "   | 1847, | 54,261 90   |
| " "          | " "   | 1848, | 56,623 93   |
| " "          | " "   | 1849, | 53,756 32   |
| " "          | " "   | 1850, | 64,318 31   |



To exhibit more clearly the practical success of the Improvement, the following comparative statement is given of several of the staple productions of the valley, and the travel passing over it in 1845, the first year after its completion, and the year 1850, viz:

|                     | 1845.       | 1850.       | Increase.   |
|---------------------|-------------|-------------|-------------|
| Through Passengers, | 22,726      | 38,988½     | 16,262½     |
| Way Passengers,     | 20,075      | 77,351      | 57,276      |
| *Flour, No. bbls.,  | 28,396      | 40,762      | 12,366      |
| Glass, " boxes,     | 47,331      | 84,911      | 37,580      |
| Salt, " bbls.,      | 7,929       | 16,501      | 8,572       |
| Brick,              | 760,100     | 1,132,400   | 372,300     |
| Boards, feet,       | 1,124,115   | 5,470,167   | 4,346,052   |
| Shingles,           | 347,000     | 1,798,750   | 1,451,750   |
| Coal, bushels,      | 4,605,185   | 12,297,967  | 7,692,782   |
| Total toll,         | \$28,579 70 | \$64,318 31 | \$35,738 61 |

It will be seen from the foregoing statement, that the increase in the articles named is from fifty to four hundred per cent., and the amount of toll has increased one hundred and twenty-five per cent.

During the last session of the Legislature, petitions were again presented praying for a reduction of toll on coal, and indeed asking an entire exemption upon boats loaded for the Southern or Western markets. The Board directed a remonstrance to be forwarded, setting forth the injustice and impropriety of granting the prayer of the petitioners, which, together with the petitions, were referred to the Judiciary Committee, and in March last, they reported *against* it. The remonstrance and report of the Committee, are appended to this Report.

We trust, therefore, that this fruitful source of annoyance is at an end, and that there will be no further attempts to disturb our present low rate of tolls.

There are still two or three claims for damages pending against the Company, although it is very generally admitted, that the

\*The quantity of Flour in 1847, '48 and '49 exceeds 1850.

value of all land laying adjacent to the river, has been enhanced by the construction of the Improvement. Such was the opinion of a very intelligent set of viewers, who, in October last, examined the two cases in Washington County, referred to in the last Annual Report. The claim, in one case, was for "washing and undermining the banks, and overflowing the land." In the other, for "washing and undermining the banks, causing them to slip." The award in both cases was, that the advantages derived from the Navigation exceed any damage done.

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It has been feared by many friends of this Improvement, that the opening of the Pennsylvania Railroad, to Philadelphia, will materially reduce its tolls. Such fear we think entirely groundless, as the through travel and trade, now passing over the Monongahela, that may be diverted to the Railroad, form but a small portion of our business, and pay but a fraction of the amount of tolls received. During the past year, the whole number of stage passengers was eighteen thousand three hundred and seventy-nine, whilst the number of through passengers on the river was 38,988½, and the way passengers 77,351.

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| The toll collected on stage passengers, | 4,594 75 |
| “ “ “ “ Eastern Merchandise,            | 3,529 99 |
| Western Produce shipped East,           | 728 17   |

|                               |            |
|-------------------------------|------------|
| Making a total of <i>only</i> | \$8,852 91 |
|-------------------------------|------------|

Should this whole amount be withdrawn, it would not materially affect the receipts of the Company, being but little over one eighth of the whole amount. But as the completion of the Railroad will greatly increase the local trade and travel of the valley of the Monongahela, it will, in this way, add more to our business than will be diverted from it.

The Monongahela river passes through a valley upwards of

two hundred miles in extent, without a rapid or an island to disturb its rippling waters, or mar its beauty. The valley is unsurpassed in its mineral wealth and agricultural resources, and in the grandeur and beauty of its scenery. Its banks are covered with growing towns and thriving villages, the inhabitants of which are generally engaged in various kinds of manufactures. Its trade, now but in its infancy, is increasing rapidly. Pittsburgh has been, and will continue to be, the immediate recipient of this greatly augmented trade and travel.

It is a matter of gratulation to the Stockholders and Managers of this Company, that whilst their successful enterprise has contributed so largely to the business and prosperity of the Iron City, it has added considerably to the tolls on the State Works, and something to the trade of Philadelphia, in her competition with New York for the business of the great valley of the Mississippi.

It is gratifying to be able to state, that during the year 1850, the Navigation was not suspended a single day by ice or any other obstruction.

The Report and balance sheet of the Treasurer, herewith, sets forth fully the financial condition of the Company, and the tables prepared by the Cargo Inspector, give details of the nature and character of the business.

Respectfully submitted,

J. K. MOORHEAD,

*President.*

OFFICE MONONGAHELA NAV. CO. }

PITTSBURGH, Jan. 6, 1851. }

## MEMORIAL.

*To the Honorable the Senate and the House of Representatives of the Commonwealth of Pennsylvania.*

The Memorial of the President and Managers of the Monongahela Navigation Company,

Respectfully represents,

That your Memorialists are advised that an application has been made to your Honorable bodies, in behalf of individuals interested in the coal trade of the Monongahela River, for a further reduction of the tolls on that article. Your memorialists have been compelled, on sundry occasions, by the untiring assiduity of those who are now asking further legislation at your hands, to appear before you in the vindication of their just rights under our laws. They had supposed, however, that the Act of the last session, resulting as it did in a liberal compromise of the whole question, would have satisfied even the most unreasonable, and quieted all future controversy upon that subject. It seems they were mistaken. They are now dragged before you again, and are again required to defend themselves against the exactions of those who have been most largely benefitted by their Improvement, and would now most ungratefully deprive them of all chance even of reimbursement for their outlay. Your Memorialists beg leave to say that they undertook the construction of their work and prosecuted it under the most adverse circumstances, with very precarious chance of remuneration, and with a view mainly to the development of the mineral resources of the Monongahela Valley, which had been previously locked up for the want of a sufficient outlet; that relying for ultimate reimbursement almost exclusively upon the tolls upon the article of coal, that they succeeded, after a very large expenditure of money, in opening up a permanent highway, and a constant market for the owner and proprietor of the

coal lands along its banks, who had taken a deep and active interest in the Improvement, and whose property was very largely increased in value thereby; that in return, therefore, they imposed upon the article so largely benefitted, and the trade in which was mainly created by themselves, a duty so slight as not to be comparable in amount with that levied upon other public improvements of the like description in this country; that they have incurred a large debt in the completion of their works, which has disabled them from declaring any dividends whatever upon their stock, although fourteen years have now elapsed since their organization; and that, moreover, the whole amount of their receipts from the article in question has not been even commensurate with the additional outlay to which they have been subjected for the purpose of accommodating the trade in that article. In order to show, however, the unreasonableness of the present attempt to exonerate the article, most advantaged by their Improvement, from all contribution towards the expenses thereof, your Memorialists will take occasion to refer more particularly to the position they occupy in relation thereto.

The Act of 24th June, 1839, which was passed in order to enable the Company to complete their works, authorized them to impose tolls at their discretion, subject, however, to the control and regulation of the Legislature. The same Act, however, provided that the Company should not be compelled to permit any boat or other craft to pass toll free, unless their dividend should exceed twelve per cent., which was the limitation imposed, and which was the express design of the Legislature that they should enjoy as an inducement to, and in recompense of, their great risk. This work was completed under these auspices more than eight years after its commencement, and at an expense of nearly \$500,000, being almost double the cost originally contemplated by your Memorialists. Your Memorialists further state, that with a view to the encouragement of the coal trade, the rates of toll assessed by them for several years upon that article, was only \$2,91 cents per thousand bushels, or a fraction over the *one-fourth* of a cent on the bushel, for the whole length

of their Improvement, being a distance of about 56 miles, as will appear by the following table :

|             |                           |           |
|-------------|---------------------------|-----------|
| Lock No. 1, | Lockage                   | 50 cents. |
| Pool " "    | 10 miles (5 cts. per m.)  | 50 "      |
| Lock No. 2, | Lockage,                  | 40 "      |
| Pool " "    | 14 miles, (4 cts. per m.) | 56 "      |
| Lock No. 3, | Lockage,                  | 30 "      |
| Pool " "    | 15 miles, (3 cts. per m.) | 45 "      |
| Lock No. 4, | Lockage,                  | 20 "      |
| Pool " "    | 17 miles,                 | Nothing   |

— \$2.91

Reasonable, however, as was this assessment, falling, as we have already stated, very far below that levied elsewhere, upon the same article, the unexampled facilities afforded by your Memorialists' works came, by a not unusual process, to be entirely overlooked, and the parties benefitted to regard the tolls as a burden from which they ought to be entirely exempted. They remembered that the river had been previously free, but forgot that frequently it could not be used, and they accordingly applied to the Legislature, at its last session, to relieve them entirely, notwithstanding the provisions of your Memorialists' charter, from what they were pleased to complain of as a grievous incumbrance. To satisfy them, however, and to appease a clamor which your Memorialists felt to be not less unreasonable than it was unjust to themselves, they consented to a reduction of the above rates to the extent of *one-half* in their two upper pools, upon the express consideration incorporated into the Act of Assembly of March 21, 1849, and to which the Legislature therein solemnly became a party, that no further reduction should be made until the (then) present indebtedness of the Company was fully paid, and a dividend of eight per cent. per annum declared to the Stockholders. Your Memorialists further state, that in pursuance of the above Act, they did not merely in good faith reduce the tolls, as therein provided, upon their two upper pools, but that in order to have no room for controversy, in regard to its meaning, they extended the reduction to the *Lockage* upon their

pools, which was *not* required by the terms of the Law, and thereby cut down their tolls to the extent of  $47\frac{1}{2}$  cents on the thousand bushels. You are now asked, however, in the face of their so recent enactment, thus liberally carried out by the Company, without any material reduction of their immense debt, and without the declaration of any dividend to their Stockholders, to cut them down still lower. It is now respectfully suggested whether this can be done, under these circumstances, consistently with justice, with good faith, or with the provisions of the constitution?

Your Memorialists have already suggested, that whilst the owners of coal lands, who are now claiming the use of their works without compensation, have been so largely benefitted thereby, they have as yet derived themselves no revenue even from the very source upon which they mainly relied for their indemnity.

In support of this statement they exhibit the following table of their receipts from that article :

|       |             |             |
|-------|-------------|-------------|
| 1845, | \$ 5,283 79 |             |
| 1846, | 10,221 28   |             |
| 1847, | 13,241 94   |             |
| 1848, | 12,438 43   |             |
| 1849, | 13,533 39   |             |
|       | —————       | \$54,718 83 |

They have expended, however, during the same period, in the erection of an additional Lock, undertaken and constructed for the express accommodation of this particular trade, the sum of \$56,800, being an excess of more than \$2,000 over and above their whole gross receipts from that quarter.

They ask your attention to the foregoing table in another aspect. They have remarked, incidentally, that this trade was mainly created by themselves. They have not taken the trouble to ascertain what it was before the construction of their work, as it was not then of sufficient consideration to attract any great share of the public attention. The table just quoted, however, shows

that within the first three or four years of the operation of your Memorialists' Improvement, it was nearly trebled.

Your Memorialists beg leave further to suggest, that although their revenues have thus far been drawn from other sources, the most productive of them perhaps is of such a character as is not likely to endure for many years. They have never reckoned upon the through-travel between Pittsburgh and the sea-board, as one of the permanent supports of this work, because they could not but anticipate that its current would be soon directed through other and more attractive channels.

They relied exclusively, therefore, upon the local trade of the Monongahela Valley, and particularly upon that branch of it which is most benefitted, and which is now sought to be relieved from its own proper contribution to the support of that instrument by which it has been mainly created, or if not created, made what it now is. They suggest, however, that independently of any considerations of injury to themselves, it would be unfair to relieve it at the expense of the agriculture of that valley, by throwing the burden exclusively upon an interest which has profited less.

Your Memorialists have complied strictly and literally with all Acts of Assembly heretore passed, relative to their Improvement; and although there has not been, and will not be, for several years, a single dollar paid to the Stockholders, in the shape of dividend, yet, under "An Act to reduce the State Debt, passed the 29th day of April, 1844," they have been annually paying a tax to the State, which for the last year amounted to \$593,23.

Your Memorialists will now take leave of the subject without further remarks, trusting that the good sense and integrity of your Honorable bodies will dictate such a reply to those who are again agitating this question, as will prevent further molestation of the same kind, and quiet your Memorialists in the enjoyment of the rights which they hold under the plighted faith of the Legislature. And they will pray, &c.

J. K. MOORHEAD,

WM. BAKEWELL, *Secretary.*

*President.*



## REPORT OF THE JUDICIARY COMMITTEE

Made to the House of Representatives, March, 1850.

In the House of Representatives, Mr. CORNYN, from the Judiciary Committee, to whom were referred the petitions of citizens of western Pennsylvania, asking a further reduction of the tolls on the Monongahela Slack-water Navigation, and also the memorial of the President of the said company, remonstrating against the reduction of the same, made a report, that they have had the matter under consideration, and respectfully submit the following :

It would appear from the following comparative statement, showing the amount charged on one thousand bushels of coal, and also upon one ton of coal, transported fifty-six miles on other improvements, to wit :

|                                      | per 1,000 bu. | 1 ton, 2,240 lbs.                     |
|--------------------------------------|---------------|---------------------------------------|
| Schuylkill Navigation, - - -         | \$11,85       | 33 $\frac{18}{100}$ cts.              |
| Penna. and Ohio Canal, - - -         | 10,24         | 28 $\frac{67}{100}$ "                 |
| Pennsylvania Canal, - - -            | 10,08         | 28 $\frac{32}{100}$ "                 |
| Tide Water Canal, - - -              | 9,22          | 27 $\frac{77}{100}$ "                 |
| Green, Barren and Kentucky rivers,   | 9,00          | 25 $\frac{30}{100}$ "                 |
| Erie Extension, - - -                | 7,84          | 21 $\frac{85}{100}$ "                 |
| Muskingum Lock Nav., O. - - -        | 7,36          | 20 $\frac{81}{100}$ "                 |
| <b>Monongahela Navigation, - - -</b> | <b>2,91</b>   | <b>8<math>\frac{14}{100}</math></b> " |

That the claims of the petitioners to a still further reduction of toll are not well founded. Your committee has not been able to perceive, in the examination of the subject, "the multiplied evils resulting from the exorbitant tolls charged by the Monongahela Slack-Water Navigation Company," as set forth and complained of in said petition.

But even were it otherwise, your committee are not clothed with power to disregard and set aside the Act of Assembly of March 21st, A. D. 1849; which is in these words:

SECTION I. *Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania, in General Assembly met, and it is hereby enacted by the authority of the same,* That from and after the passage of this act, all rafts, flats and flat boats descending the river from any point more than three miles above Brownsville, and within the State of Pennsylvania, and not intending to return, shall not be subject to a higher toll than seventy-five cents per lock, including cargo, until the company shall complete the first dam above Brownsville; *Provided,* That no such craft shall take in any additional cargo on the line of the improvement, nor use or lie by in any of the harbors created by the improvement, for a period of more than ten days, without being subject to the payment of the regular tolls.

SEC. 2. That the present rates of toll on coal shall be reduced by the company fifty per cent. on pools Nos. three and four, on all coal carried in flat boats, intended to pass down the Ohio river; and in consideration thereof, the Legislature shall not further reduce the tolls, until the present indebtedness of the company shall have been paid, and a dividend of eight per cent. per annum paid to the stockholders, and no reduction shall be made at any time so as to afford a less dividend than eight per cent. per annum on the capital stock. *Provided,* That the terms of this Act shall not be so construed as to affect or alter the provisions of the Act passed in the year one thousand eight hundred and forty eight, requiring the company to pay one-half the dividends above 10 per cent. per annum into the Treasury of the Commonwealth.

SEC. 3. That so much of any Act or Acts to which this is a supplement, as are hereby altered or amended, shall be, and the same are hereby repealed.

SEC. 4. The Legislature reserves the right to alter or amend the charter of said company at any time hereafter, should they violate, abuse, or misuse the privilege granted, and such fact be previously found by the verdict of a jury, and the judgment of

the proper court thereon, under a writ of scire facias issued against them at the suit of any individual or individuals who may be aggrieved.

WILLIAM F. PACKER,

Speaker of the House of Representatives.

GEORGE DARSIE,

Speaker of the Senate.

Approved the twenty-first day of March, A. D. one thousand eight hundred and forty-nine.

WM. F. JOHNSTON.

It appears by the tenth and last report of the President and Managers of the Monongahela Slack-Water Navigation Company, that they have complied in all respects with the provisions of the Act. The Act was passed on the 21st of March, and on the 24th, three days subsequent to its passage, the toll was reduced fifty per cent. on pools No. 3 and 4, as directed in said Act.

This Act, then, having been accepted by the Board of Managers, became a contract between them and the State, and in the absence of any proof of the violation of its terms, it remains a contract good and binding, and one which the Legislature would not feel authorized to alter or impair; nor indeed has it the power to do so, it being expressly forbidden by the Constitution, in Article IX. Section 17: "No *expost facto* law, nor any law impairing contracts, shall be made."

*Resolved*, That they be discharged from the further consideration of this subject.

The Judiciary Committee is composed of :

Hon. James M. Porter, Northampton,

" John N. Conyngham, Luzerne,

A. K. Cornyn, Esq., Huntingdon,

H. P. Laird, Esq., Westmoreland,

John S. Rhey, Esq., Armstrong,

Daniel M. Symser, Esq., Adams,

G. W. Schofield, Esq., Warren,

John B. Parker, Esq., Northumberland,

Craig Biddle, Esq., Philadelphia city.

## STATEMENT

*Of the Business on the Monongahela Slackwater during the  
Year ending December 31st, 1850.*

|                              |   |                 |             |
|------------------------------|---|-----------------|-------------|
| Receipts from Freights, &c., | - | \$28,587        | 95          |
| "    "    Coal,              | - | 17,023          | 57          |
| "    "    Passengers,        | - | 18,702          | 29          |
|                              |   | <u>        </u> | \$64,313 81 |

*Receipts at the Several Locks.*

|             |   |                 |             |
|-------------|---|-----------------|-------------|
| Lock No. 1, | - | \$37,456        | 64          |
| "    No. 2, | - | 11,731          | 80          |
| "    No. 3, | - | 5,709           | 25          |
| "    No. 4, | - | 9,416           | 12          |
|             |   | <u>        </u> | \$64,313 81 |

*Trade of Pool No. 1, both ways.*

|                                    |   |                       |
|------------------------------------|---|-----------------------|
| Tow Boats,                         | - | 2,528                 |
| Flats,                             | - | 6,200                 |
|                                    |   | <u>        </u> 8,728 |
| No. of clearances issued Eastward, | - | 2,513                 |
| "    "    "    Westward,           | - | 3,209                 |
|                                    |   | <u>        </u> 5,722 |

*Passenger Returns of the Boats running on the Monongahela  
Slack-Water, for the year 1850.*

| BOATS.               | PASSENGERS.    |               | No. of Locks.  | TOLLS.            |
|----------------------|----------------|---------------|----------------|-------------------|
|                      | Through.       | Way.          |                |                   |
| Atlantic, - - -      | 18,213½        | 19,774        | 34,478         | 6,966 88½         |
| Baltic, - - -        | 20,008         | 19,223        | 33,982         | 7,380 74          |
| Fashion, No. 2, - -  | -----          | 19,930        | 31,452         | 2,201 64          |
| Viroqua, - - -       | -----          | 3,263         | 5,881          | 411 67            |
| Shipper, - - -       | -----          | 552           | 993            | 69 51             |
| Camden, - - -        | -----          | 7,029         | 9,648          | 675 36            |
| John McKee, - - -    | -----          | 1,672         | 2,294          | 160 58            |
| Ariadne, - - -       | 44             | 40            | 53             | 14 71             |
| R. H. Lindsay, - -   | 92             | 51            | 89             | 29 23             |
| Globe, - - -         | 383½           | 170           | 266            | 114 49½           |
| Star, - - -          | -----          | 205           | 257            | 17 99             |
| Transient Boats - -  | 29½            | 540           | 598            | 49 23½            |
| Chieftain, - - -     | -----          | 61            | 122            | 8 54              |
| Thomas Shriver, - -  | -----          | 1,012         | 1,840          | 128 80            |
| Peytona, - - -       | -----          | 1,812         | 2,430          | 170 10            |
| Phillip Doddridge, - | 21             | 11            | 23             | 6 86              |
| Youghiogheny, - -    | -----          | 1,675         | 2,943          | 206 01            |
| J. B. Gordon, No. 2, | 197            | 331           | 582            | 89 99             |
| <b>Total, - - -</b>  | <b>38,988½</b> | <b>77,351</b> | <b>127,931</b> | <b>18,702 29½</b> |

*Passenger business in 1849 and 1850 compared.*

|                               | 1849.               | 1850.             | Increase in 1850. |
|-------------------------------|---------------------|-------------------|-------------------|
| Through Passengers,           | 35,158½             | 38,988½           | 3,830             |
| Way do.                       | 56,004              | 77,351            | 21,347            |
| <b>Total,</b>                 | <b>91,162½</b>      | <b>116,339½</b>   | <b>25,177</b>     |
| Toll on thro' pas'gers,       | 8,789 62½           | 9,747 12½         | 957 50            |
| do way do.                    | 6,548 22            | 8,955 17          | 2,406 95          |
| <b>Total passenger tolls,</b> | <b>\$15,337 84½</b> | <b>18,702 29½</b> | <b>\$3,364 45</b> |

## STATEMENT

*Of Freight shipped both ways on the Monongahela Slack Water, during the year 1850.*

| Shipped Eastward from Pittsburgh. |       |                     | Arrived Westward at Pittsburgh. |          |                   |
|-----------------------------------|-------|---------------------|---------------------------------|----------|-------------------|
| Flour,                            | bbls, | 2,341               | Lime,                           | bushels, | 26,394            |
| Salt,                             | do.   | 15,436              | Wheat,                          | do.      | 6,611             |
| Empty                             | do.   | 7,046               | Sand,                           | do.      | 127,700           |
| Whiskey,                          | do.   | 4,352               | Oats,                           | do.      | 41,830            |
| Apples,                           | do.   | 564                 | Potatoes,                       | do.      | 753               |
| Potatoes,                         | bush. | 6,770               | Flour,                          | barrels, | 38,421            |
| Boards,                           | feet  | 5,047,988           | Whiskey,                        | do.      | 3,217             |
| Timber,                           | do.   | 546,720             | Salt,                           | do.      | 1,065             |
| Pig Iron,                         | tons, | 1,590 $\frac{1}{2}$ | Empty                           | do.      | 2,800             |
| Copper Ore,                       | do.   | 683                 | Apples,                         | do.      | 3,665             |
| Shingles,                         | No.   | 1,798,750           | Cider,                          | do.      | 229               |
| Hoop Poles,                       | "     | 8,600               | Iron Ore,                       | tons,    | 386               |
| Lath,                             | "     | 564,100             | Pig Iron,                       | do.      | 288 $\frac{3}{4}$ |
| Brick,                            | "     | 115,578             | Hay,                            | do.      | 140 $\frac{1}{2}$ |
| Carriages,                        | "     | 43                  | Wood,                           | cords,   | 225               |
| Hogs,                             | "     | 1,287               | Bark,                           | do.      | 10                |
| Horses,                           | "     | 127                 | Stone,                          | perches, | 5,981             |
| Wagons,                           | "     | 105                 | Posts,                          | No.      | 2,485             |
| *Hemp,                            | lbs.  | 475                 | Staves,                         | do.      | 20,950            |
| *D'd fruit, &c                    | "     | 150,040             | Hoop Poles,                     | do.      | 17,187            |
| *Tobacco, leaf,                   | "     | 148,660             | Lath,                           | do.      | 40,100            |
| *Butter, lard, &c.                | lbs   | 276,491             | Shingles,                       | do.      | 28,500            |
| *Ginseng & beeswax,               |       | 29,234              | Brick,                          | do.      | 1,132,400         |
| *Wool, feathers, mdze,            |       | 437,420             | Carriages,                      | do.      | 43                |
| *Bacon and Pork,                  |       | 1,384,914           | Wagons                          | do.      | 73                |
|                                   |       |                     | Horses,                         | do.      | 127               |
| Total lbs class'd fr't            |       | 27,848,187          | Hogs,                           | do.      | 308               |
|                                   |       |                     | Steamboat hulls,                |          | 27                |
|                                   |       |                     | Window Glass, boxes,            |          | 84,911            |
|                                   |       |                     | Boards,                         | feet,    | 422,447           |
|                                   |       |                     | Timber,                         | do.      | 34,827            |
|                                   |       |                     | Iron,                           | pounds,  | 386,710           |
|                                   |       |                     | Nails,                          | do.      | 1,340,900         |
|                                   |       |                     | Eastern mdze                    | do.      | 8,824,978         |
|                                   |       |                     | Total lbs class'd fr't          |          | 14,803,524        |

\*For Eastern Markets.

## STATEMENT OF COAL SHIPPED

*In the several Pools of the Monongahela Slack Water during the year 1850.*

| Months.  | Pool No. 1. | Pool No. 2. | Pool No. 3. | P'1 No. 4. | Total.     |
|----------|-------------|-------------|-------------|------------|------------|
|          | BUSHEL.     | BUSHEL.     | BUSHEL.     | BUSHEL.    | BUSHEL.    |
| January, | 174,400     | 167,544     | 73,788      | 13,000     | 428,732    |
| Febr'y,  | 158,000     | 158,840     | 94,623      | 30,628     | 442,091    |
| March,   | 367,800     | 501,258     | 148,055     | 165,208    | 1,182,321  |
| April,   | 547,100     | 890,104     | 252,563     | 176,017    | 1,865,784  |
| May,     | 414,400     | 477,538     | 162,721     | 49,638     | 1,104,297  |
| June,    | 239,700     | 690,356     | 130,900     | 93,118     | 1,154,074  |
| July,    | 225,100     | 39,000      | 59,700      | 4,000      | 327,800    |
| August,  | 184,100     | 63,300      | 81,000      | 12,834     | 341,234    |
| Septem.  | 309,300     | 89,900      | 65,000      | 15,000     | 479,200    |
| October, | 662,000     | 1,230,160   | 400,702     | 199,205    | 2,492,067  |
| Novem.   | 372,800     | 773,440     | 202,984     | 65,203     | 1,414,427  |
| Decem.   | 333,500     | 459,030     | 190,512     | 82,898     | 1,065,940  |
| Total,   | 3,988,200   | 5,540,470   | 1,862,548   | 906,749    | 12,297,967 |

## RECAPITULATION.

| POOLS.   | Bushels in Boats. | Bushels in Flats. | TOLLS.      |
|----------|-------------------|-------------------|-------------|
| No. 1... | 1,327,500         | 2,660,700         | \$2,846 60  |
| No. 2... | 5,134,510         | 405,960           | 9,368 81    |
| No. 3... | 761,833           | 1,100,715         | 3,520 55    |
| No. 4... | 601,199           | 305,550           | 1,287 61    |
| Total,   | 7,825,042         | 4,472,925         | \$17,023 57 |

*Comparison of Coal business for 1849 and 1850.*

|                   | 1849.       | 1850.       | Inc'se in 1850. |
|-------------------|-------------|-------------|-----------------|
| Bushels in Flats, | 3,378,600   | 4,472,925   | 1,094,325       |
| do. " Boats,      | 6,329,907   | 7,825,042   | 1,495,135       |
| Tolls .....       | \$13,533 39 | \$17,023 57 | \$3,490 18      |





## MOORHEAD, ROBERTSON &amp; CO.

(MORTGAGES,)

*In account with the Monongahela Navigation Company, for  
Receipts and Disbursements for the year 1850.*

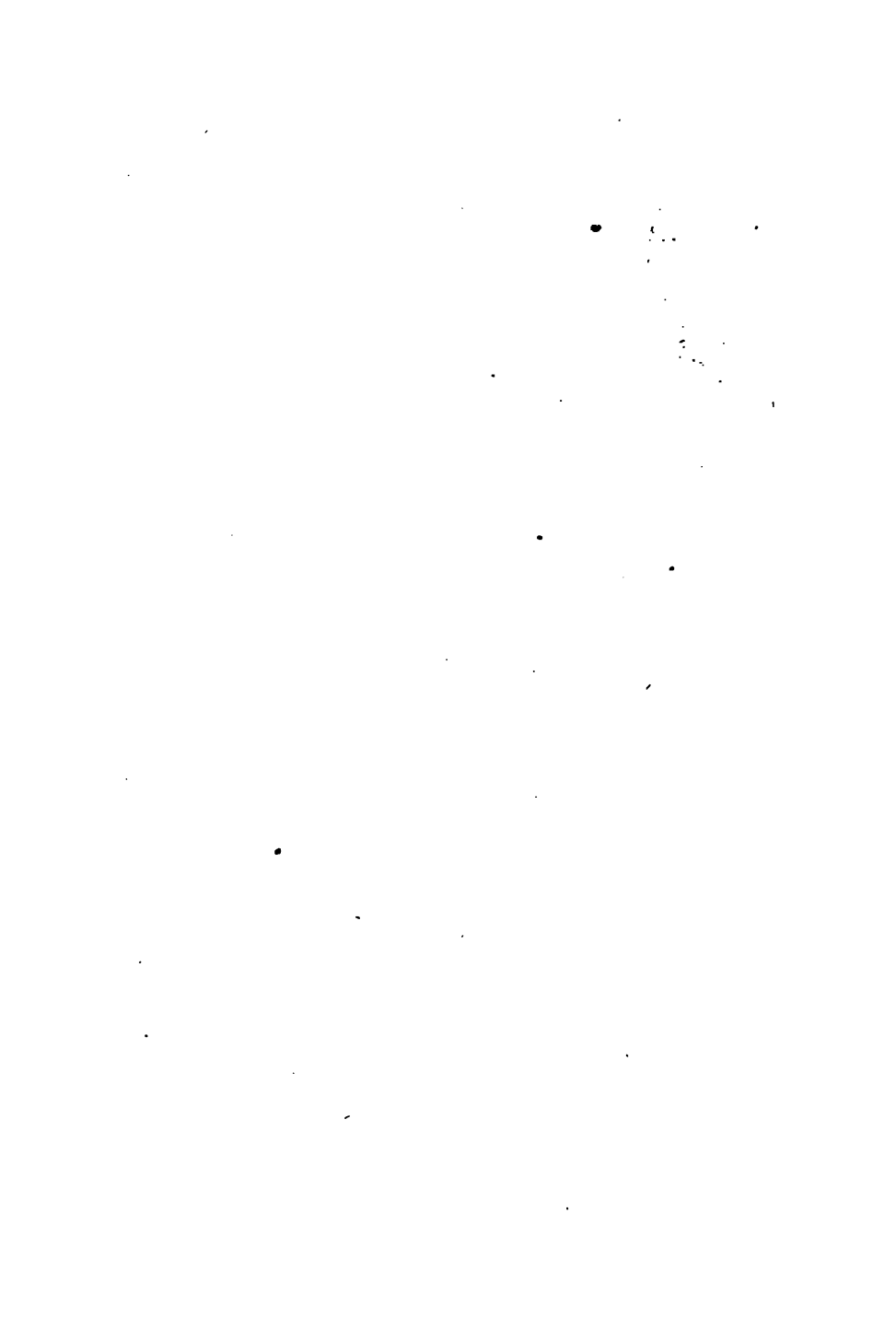
## RECEIPTS.

|                                 |                   |                    |
|---------------------------------|-------------------|--------------------|
| Balance brought from last year, |                   | \$17,400 36        |
| Tolls received at Lock No. 1    | \$8,248 24        |                    |
| Do. 2                           | 1,871 24          |                    |
| Do. 3                           | 1,356 00          |                    |
| Do. 4                           | 3,465 50          |                    |
| First quarter, - - -            | <u>          </u> | 14,940 98          |
| Tolls received at Lock No. 1    | 11,100 29         |                    |
| Do. 2                           | 4,030 34          |                    |
| Do. 3                           | 1,579 02          |                    |
| Do. 4                           | 2,189 85          |                    |
| Second quarter, - - -           | <u>          </u> | 18,899 50          |
| Tolls received at Lock No. 1    | 7,314 70          |                    |
| Do. 2                           | 682 61            |                    |
| Do. 3                           | 916 99            |                    |
| Do. 4                           | 1,140 79          |                    |
| Third quarter, - - -            | <u>          </u> | 10,055 09          |
| Tolls received at Lock No. 1    | 10,793 41         |                    |
| Do. 2                           | 5,147 60          |                    |
| Do. 3                           | 1,857 24          |                    |
| Do. 4                           | 2,619 98          |                    |
| Fourth quarter, - - -           | <u>          </u> | 20,418 23          |
|                                 |                   | <u>\$81,714 16</u> |

## DISBURSEMENTS.

|                                                                                                                 |          |             |
|-----------------------------------------------------------------------------------------------------------------|----------|-------------|
| Jan. 1. Bonds paid and cancelled,                                                                               | 18,000   |             |
| July 1. Do. Do. Do.                                                                                             | 16,500   |             |
| Amount of Bonds paid in 1850,                                                                                   | ————     | \$34,500 00 |
| Expense in First Quarter,                                                                                       | 2,068 29 |             |
| Do. Second do.                                                                                                  | 2,310 46 |             |
| Do. Third do.                                                                                                   | 1,471 96 |             |
| Do. Fourth do.                                                                                                  | 2,384 46 |             |
| Total expenses in 1850,                                                                                         | ————     | 8,235 17    |
| Repairs in First Quarter,                                                                                       | 425 75   |             |
| Do. Second do.                                                                                                  | 510 03   |             |
| Do. Third do.                                                                                                   | 1,890 21 |             |
| Do. Fourth do.                                                                                                  | 602 53   |             |
| Total repairs in 1850,                                                                                          | ————     | 3,428 52    |
| Interest in First Quarter,                                                                                      | 267 01   |             |
| Do. Second do.                                                                                                  | 5,306 80 |             |
| Do. Third do.                                                                                                   | 247 50   |             |
| Do. Fourth do.                                                                                                  | 4,925 00 |             |
| Total Interest paid in 1850,                                                                                    | ————     | 10,746 31   |
| Old debt paid Bank of Pittsburgh,                                                                               | 766 00   |             |
| Do. paid claim of Geo. Gossin,                                                                                  | 209 29   |             |
| Old debt paid in 1850,                                                                                          | ————     | 975,29      |
| Taxes paid Commonwealth of Pennsylvania on Capital stock for the year 1850,                                     |          | 667 38      |
| Balance carried to next year, of which \$22,000 is applicable to the payment of Bonds on the 1st January, 1851, |          | 23,161 49   |
|                                                                                                                 |          | <u>————</u> |
|                                                                                                                 |          | \$81,714 16 |

ATTEST: THOS. M. HOWE, Treasurer.



TWELFTH  
ANNUAL REPORT,  
OF THE  
PRESIDENT AND MANAGERS,  
TO THE  
MONONGAHELA NAVIGATION  
COMPANY;

**Presented January, 1852,**

WITH THE  
ACCOMPANYING DOCUMENTS.

PITTSBURGH:

PRINTED BY W. S. HAVEN, CORNER OF MARKET AND SECOND STREETS.

1852.



TO THE STOCKHOLDERS  
OF THE  
MONONGAHELA NAVIGATION COMPANY.

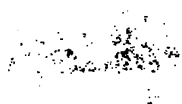
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The period having again arrived when it becomes the duty of the Managers to make their Annual Report to the Stockholders of this Improvement, they proceed to submit such statements and suggestions, in regard to its condition and prospects, as the occasion seems to require at their hands.

It affords them great satisfaction to be enabled to say that the year which has just expired, has added another to the multiplying evidences of the stability, usefulness and prosperity of the work with whose supervision they have been charged.

During the period referred to, they have had no interruptions of consequence to record. The Locks and Dams of which the Improvement is composed, have been found at all times equal to the demands which have been made upon them, with the exception only of a temporary obstruction of a few days' continuance at Lock No. 4, arising from extraneous causes, and in no wise chargeable to any defects in the Works of the Company.

The obstruction referred to, was the result of a forcible displacement of the lower gates, occasioned by an ascending boat, while the steamer Atlantic was in the act of passing in the same direction through the upper ones. Through some mistake or mismanagement on the part of the pilot of the former, she was driven by the force of steam against the lower gates with such a momentum as to force one gate upwards against the full head of water, while its fellow, left without other support than the mitre-sill, and exposed to the whole force of the accumulated flood, was swept



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downward and torn from its fastenings by the violence of the current. The effect was of course to close the upper gates at once upon the Atlantic with a force that held her there as though she had been compressed by the jaws of a vice, while the torrent rushed through the Lock with all the force and velocity which a head of eight feet would naturally impart to it. Fortunately, however, a pair of new gates were in course of preparation and nearly completed; and although the extrication of the steam boat and the shutting off the water from the Lock proved to be a laborious and expensive task, it was successfully accomplished, and the new gates suspended, under the personal superintendence of the President, within four days of the occurrence of the accident.

In order, however, to provide against the recurrence of any similar casualty, arrangements were made for the preparation of extra gates. A new pair has been placed in Lock No. 3, and a provision of materials secured at all the other Locks.

These repairs, being of an extraordinary character, have of course increased the expense upon that item beyond the usual amount. The aggregate, however, for the year, including the ordinary repairs to the Dams and removing obstructions to the navigation, amounts only to the sum of \$4,696 82, a very inconsiderable sum when compared with the value and extent of the Improvement.

The Managers have also to state, that, in addition to the temporary obstruction arising from the accident which has already been described, the navigation has recently been interrupted throughout, by a contingency which, although very unusual, was beyond their control. The excessive cold with which this region has been visited, at the commencement of the present winter, resulted, as might have been expected, in locking up the whole river, and entirely suspending navigation as early as the 17th of December; and it remained closed until the end of the year, depriving us of two weeks' navigation at a season when business was unusually brisk. A like occurrence took place in the month of December, 1846, when the navigation was interrupted for a period of three weeks; and then, as now, the accumulated masses

of ice passed off without doing any material damage to the structures under our charge. We regret to add, however, that a number of boats, laden with coal, have been cut down and destroyed by the ice, three of which (the property of Mr. Michael Dravo) were sunk immediately above the head of Lock No. 1, and may cause some obstruction to the passage of boats through that Lock until their removal can be accomplished.

Since the winter of 1846, until the present one, navigation has never been suspended three days at one time in consequence of ice; and judging from past experience, we may not anticipate a similar interruption for many years to come.

The tolls collected during the past year, as will be seen by the accompanying reports, amount to the sum of \$65,974,61, being an increase of \$1,661,30 over the previous year. The fact of this increase in the face of the entire diversion of the through travel, which is now almost engrossed by the Central Railroad, and the entire loss of two weeks' time by the late freeze when business was very good, and the tolls would have amounted to about \$4,000, is a new and satisfactory demonstration, as well of the independent character of the resources upon which the Improvement have to rely, as of its own powerful agency in developing, if not absolutely creating, along the valley of the Monongahela the very wealth and business which are destined, at no very remote day, should no casualty occur to prevent it, to bring back to the pockets of the Stockholders the money which they many years since adventurously cast upon the bosom of its waters. It was the expectation of the Board, as announced in their last Report, that the diversion of through travel which was then anticipated, would be at least compensated by the acquisition of that which was purely local; and they have not been disappointed in the result. The returns of the year show an increase in the number of way passengers greatly beyond the reduction occasioned by the causes to which we have referred. They are as follows, viz:

|                     | 1850.    | 1851.   |                  |
|---------------------|----------|---------|------------------|
| Through Passengers, | 38,988½  | 32,115½ | 6,873 decrease.  |
| Way                 | “ 77,357 | 98,123  | 20,772 increase. |

The completion and successful use of the Slackwater Improvement upon the Youghiogheny river, which has been looked to since it was first projected, as promising to be a most valuable tributary to your Work, has thrown, as was expected, a largely increased business upon the two lower Locks of the Monongahela. You are already advised that, in order to meet the prospective demand from this as well as other sources, a new and larger Lock has already been built at the lower Dam, more than doubling the capacity of that portion of your Work, and greatly facilitating the coal as well as general trade and navigation. It is proper, however, to suggest, in this connection, that the Lock at the second Dam, upon which, of course, a large additional labor is now thrown, has, through some defect in its original construction, become so leaky as to render the operation of opening and closing its gates much more tedious and laborious than it would otherwise be. The defect is of such a nature as not to be easily remedied; and if the trade should continue to increase, the construction of an additional Lock at that point will soon become indispensable. This, however, would involve an expenditure of about \$50,000—a sum so large that, in the present embarrassed condition of the finances of the Company, and with so large an amount of debt still unextinguished, the Board cannot see how it is to be accomplished.

In addition to the above, another item of repairs, of considerable magnitude, will soon become absolutely necessary; that is the construction of permanent stone abutments at the ends of the Dams, in place of the wooden or crib structures that are beginning to yield under the influence of time, and threaten, before long, to render the Dams insecure. They have looked forward, for some time past, to the eventual necessity of this improvement; but with the hope that they would be enabled to postpone it as a part of the general task of renovation, until the debts of the Company were entirely discharged. They are not without fear, however, that the security of the Work may require them to anticipate that period.

Having now disposed of such matters as refer more particularly

to the present condition of the Improvement, the Board will take the liberty of dwelling for a moment upon one other topic, which, as connected with the future prospects of the Work, is entitled to their consideration.

It will be recollected that the original design of this Improvement, comprehended the idea of its extension to the Virginia State line; and that the Company was charged with the duty of pushing and completing the Work to that point, within a limited period from the date of their Charter. In this particular, their duties and interest were in perfect harmony with each other. They foresaw in every extension of the Work, the development of a new source of revenue; and they looked, therefore, upon the requirement not as a task to be evaded, but as a privilege to be enjoyed. The financial difficulties, however, which had well nigh strangled their enterprise in its infancy, and under which, with the aid of a few enterprising men who were found willing to risk their money upon the floods of the Monongahela, under the sanctity of its Charter, it had at last struggled to a partial completion with an immense burthen of debt, forbid the idea of the early accomplishment of the original and entire plan.

But although postponed by an overruling necessity, it has never been forgotten. In the winter of 1843, the Legislature granted an extension of the time to "another period of seven years." In the meantime, however, the Board of Managers were not unmindful of either the duties or interests of the Company in this matter, as will be seen by reference to their reports and doings for a series of years. In their Report to the Stockholders in January, 1847, they refer to it thus:

"The trade of the Monongahela Valley is rapidly increasing; the banks of the river are fast becoming lined with manufacturing villages; the coal business is just beginning to be developed; and from the great extent of the Ohio and Mississippi Valleys, which must receive their main supply from thence, we may expect its continued and rapid increase. In fact, it is no great stretch of imagination to look forward to a period when the tolls from coal alone, at the present *very low rates*, will pay interest on the en-

In the next Annual Report, made in January, 1848, they recur to it again in the following terms:

“In the last Annual Report, the importance of extending the Work to the Virginia State line was urged; and it was also suggested that application had been made to the Legislature of Virginia for a Charter, authorizing a Company to make a Steamboat Navigation to Clarksburg—a distance of 100 miles or more from the State line. That application, as was anticipated, was successful; and the State made her usual subscription of two-fifths of the amount necessary to construct the work, which is delayed now for the purpose of obtaining some modification in the Charter. This renders it more important that arrangements be made at once to extend our Work to the State line, which we find impossible under the present embarrassed condition of our finances.

|                                                                                                                                                     |              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| “Our Improvement, making a complete navigation from Pittsburgh to Brownsville, of 56 miles—cost for construction, engineering, damages, &c. . . . . | \$517,225 21 |
| Whilst the total amount of capital stock subscribed and paid in, is . . . . .                                                                       | 247,179 90   |

Leaving a balance to be paid out of the tolls, . . \$270,045 31

“For this balance, warrants and bonds have been issued, and the interest is paid out of the proceeds of the Work. As a large portion of the net revenue is therefore absorbed in paying interest, it will require many years to liquidate the bonds; and until that is accomplished, the Stockholder will receive no returns in the shape of dividends. Under these circumstances, it cannot be expected that new stock can be obtained to extend the Work whilst such new subscriptions would be saddled with their just proportion of the present debt.

“The Board, therefore, contemplate asking the Legislature to authorize the subscription of stock for the purpose of said extension, under such restrictions that said subscription shall be entitled to receive in dividends the amount of revenue arising from said extension, until the entire debt due on the Work below

Brownsville is paid, after which dividends shall be made equally upon the whole stock of the Company. Whilst this arrangement would hold out inducements to the new Stockholders, it would also hasten the period when the present debt would be liquidated, as it would greatly increase the business.

“It is presumed, from the great public convenience afforded by the Improvement so far as completed, and the urgent demands of the citizens above for its extension, that the Legislature will afford such facilities as will enable us to complete the Work. Should the work in the State of Virginia be prosecuted with vigor, simultaneously with our own extension, we would soon have a continuous slack water, extending a distance of nearly 200 miles from Pittsburgh, through an exceedingly rich and fertile country, which at present has no other outlet to market than that afforded by the precarious navigation of the Monongahela river during freshets. The Monongahela navigation, during the present season, has proved to be a valuable feeder to the State canals. Of the eighty thousand barrels of flour that came through it, more than nine-tenths were shipped eastward by the Pennsylvania Canal; and so of other items. If such is the result at present, the amount of tonnage that would be thrown upon our State works, when the contemplated extension is completed, can scarcely be conceived.”

In conformity with the suggestion contained in the latter of the foregoing extracts, and with a view to the early accomplishment of an object for which, with their revenues deeply mortgaged to their creditors, it was impossible for them to command a dollar out of their own resources, the Board applied for, and obtained, the passage of an act authorizing the opening of books for the subscription of stock for that purpose, upon such terms as they supposed would secure a liberal contribution from that portion of the State which was apparently solicitous for, and certainly most deeply interested in, the extension. By the terms of this act, the obligations of the Company were placed upon a different footing. The subscribers to the stock required for the extension were authorized to appropriate to their own use the tolls and rev-

ences thereupon, until the debt incurred in the construction of the work below Brownsville was extinguished; and it was made the duty of the Company, *as soon as three thousand shares of the said stock should be subscribed*, to put the work under contract.

The Board entertained strong expectations that, under so favorable an act, the stock would be promptly subscribed, and the completion of the original design thus secured. The following extracts, however, from their Report of January, 1849, will tell the story of their exertions and disappointments:

“There is another source, however, to which it is thought this Company may look with great confidence for a further addition to its revenues; and that is from the prospective extension of the Work towards the head of the Monongahela itself. It is known to the Stockholders that, by an act passed at the last session of the Legislature, the Board were authorized to open books of subscription in the several counties along the river, for the especial purpose of extending the Improvement to the Virginia State line; and with the proviso that the proceeds of the new Locks should constitute a separate fund for the exclusive benefit of the subscribers, until the old Works should be relieved from the debt incurred in their construction. In conformity with this act, books were opened, under the direction of the Board, in the months of May and June, but without meeting with any degree of encouragement. The failure did not, however, arise so much from any want of interest on the part of the people, as from a scarcity of money, which generally exists in agricultural districts. Great and laudable anxiety, however, was manifested amongst the people residing above Brownsville for the extension of the Work; and it was suggested that an application would probably be made to the Legislature to authorize a corporate subscription on the part of the county of Greene, with the expectation that the capitalists of Pittsburgh would furnish any balance that might be required. It is apparent that, while the prolongation of the Work to the Virginia line would afford an outlet to the entire county of Greene and a large portion of Fayette, and thus increase the revenues of our Work,

it would add very materially at the same time to the rapidly augmenting trade of Pittsburgh, and, therefore, presents the strongest claims upon the consideration of her citizens. But the advantages would not stop there. If the Baltimore and Ohio Railroad Company shall proceed with their improvement, in the direction which seems to have been finally agreed upon, a further extension of our work will bring it into direct connection with that important avenue of commerce, and enable us to draw off a side stream of trade and travel in the direction of Pittsburgh, which would render any further extension of that road, if not unnecessary, at least altogether improbable. There is much, therefore, to encourage the hope that the means will be provided within a reasonable time, for the construction of so important an adjunct to the existing works of the Company."

Notwithstanding the highly favorable provisions of the Act of 1848, and the most active exertions on the part of the Board, they were not able to obtain the contribution of a single dollar, beyond the subscription of their own President, who, in the hope that his example might stimulate others, pledged his own name for the sum of \$5000.

The subject having thus received what might be considered a quietus, from the very quarter to which, most particularly, the Company looked for assistance, and the prevention of the Work being now made to depend expressly upon the condition of a previous subscription of five thousand shares, the Board would have been justified in allowing the whole matter to sleep, until they should have discovered some symptoms of an awakening amongst the inhabitants of the Upper Monongahela. They were not willing, however, to lose sight entirely of an object which had so long occupied and interested their attention; accordingly in their Report made in January, 1850, they again advert to it in the following paragraph, in which, despairing of any aid from the country, they suggest briefly the difficulties in the way of an application to the citizens of Pittsburgh:—

"The prospect for an extension of our Work to the Virginia State line, is not so favorable as we had reason to believe it



would have been by this time. The citizens along the river above Brownsville, although anxious for the extension, have been very backward about subscribing stock, and as a large debt against the Company (the details of which will be seen by an examination of the Treasurer's Report herewith,) remains unpaid, we are unable to get stock subscribed in the city."

The subject was again brought to the notice of the Board in January, 1851, by a resolution of the House of Representatives, conveyed by a committee of that body to their President, who happened to be in Harrisburg at the time. They annex a copy of the resolution, and the President's reply thereto:—

"HOUSE OF REPRESENTATIVES, }  
January 25, 1851. }

"Resolved, That a committee of five be appointed to inquire of the Monongahela Slackwater Navigation Company, through their President, why the completion of said Work is delayed to the Virginia State line."

Ordered that Messrs. Griffin, Walker, Roberts, Leet and Robertson be the said committee.

Extract from the Journal.

WM. JACK, *Clerk.*

HARRISBURG, January 29, 1851.

*Gen. J. K. Moorhead:*

SIR—Being appointed a committee to transmit to you a resolution of the House of Representatives, we embrace this opportunity to perform that duty. The interrogatory is propounded in the most friendly spirit, and with the purest motive; your answer, we doubt not, will be given frankly.

We remain yours, respectfully,

JOS. E. GRIFFIN,  
ROBT. C. WALKER,  
J. D. LEET,  
M. ROBERTSON.

To which the President answered as follows:—

HARRISBURG, January 30th, 1851.

*Messrs. Griffin, Roberts, Walker, Leet and Robertson:*

GENTLEMEN—Yours of the 29th inst. embracing a copy of a resolution which passed the House on the 25th inst. has been received, and it affords me pleasure to reply to the interrogatory contained in the resolution, viz: “Why the completion of said work is delayed to the Virginia State line?”

The seventh Annual Report of the President and Managers of the Monongahela Navigation Company to the Stockholders, made January 4th, 1847, which will be found on the Journal of the House for the year 1847, and to which I would respectfully refer your committee, sets forth fully the difficulties and embarrassments of the Company, and the large amount of debt incurred in the completion of the Work to Brownsville, and urges strongly the propriety of extending the Work to the Virginia State line by private subscription of stock for that purpose. In the Report made January, 1848, the subject of the extension is again referred to, and the Board memorialized the Legislature to authorize subscriptions of stock to be received for that purpose, under such restrictions that said subscription shall be entitled to receive in dividends the amount of revenue arising from said extension, until the entire debt due on the Work below Brownsville is paid, after which dividends shall be made equally upon the whole stock of the Company.

On the 9th February, 1848, the Legislature passed an Act giving the Company such authority, and requiring them, upon the subscription of \$150,000, to put the Work under contract, and extend it to the State Line, or so far as the money subscribed would construct it. Early in the spring of that year, the Board directed that public notice should be given that the books would be opened for the purpose of receiving such subscription; and in the months of May and June, I attended personally with the books in the counties of Fayette, Greene and Washington, and urged the citizens to subscribe, but without success. In Waynes-

would have been by this time. The citizens along the river above Brownsville, although anxious for the extension, have been very backward about subscribing stock, and as a large debt against the Company (the details of which will be seen by an examination of the Treasurer's Report herewith,) remains unpaid, we are unable to get stock subscribed in the city."

The subject was again brought to the notice of the Board in January, 1851, by a resolution of the House of Representatives, conveyed by a committee of that body to their President, who happened to be in Harrisburg at the time. They annex a copy of the resolution, and the President's reply thereto:—

"HOUSE OF REPRESENTATIVES, }  
January 25, 1851. }

"Resolved, That a committee of five be appointed to inquire of the Monongahela Slackwater Navigation Company, through their President, why the completion of said Work is delayed to the Virginia State line."

Ordered that Messrs. Griffin, Walker, Roberts, Leet and Robertson be the said committee.

Extract from the Journal.

WM. JACK, *Clerk.*

HARRISBURG, January 29, 1851.

*Gen. J. K. Moorhead:*

SIR—Being appointed a committee to transmit to you a resolution of the House of Representatives, we embrace this opportunity to perform that duty. The interrogatory is propounded in the most friendly spirit, and with the purest motive; your answer, we doubt not, will be given frankly.

We remain yours, respectfully,

JOS. E. GRIFFIN,  
ROBT. C. WALKER,  
J. D. LEET,  
M. ROBERTSON.

To which the President answered as follows:—

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burg, Greene County, it was suggested by some of the citizens, as all felt deeply interested in the extension of the Work, that they would make application to the Legislature, at the next session, for authority for the county to subscribe in her corporate capacity, and that after getting a corporate subscription it would be less difficult to get others. That application, I believe, has never yet been made. In January, 1850, the Board again refer to the matter, by stating that the citizens along the river above Brownsville, although anxious for the extension, have been backward in subscribing stock, and as a large debt against the Company remains unpaid, we are unable to get stock subscribed in the city. The delay, therefore, in extending the improvement to the Virginia State line, has been owing entirely to the want of funds. The Company, I can assure you, gentlemen, are anxious, ready and willing to extend the Work, if any means can be devised by which the additional subscription to the stock can be made. There is at present about one hundred and eighty thousand dollars of bonds still unpaid on the Work below Brownsville, for the payment of which the revenues of that portion of the Work are faithfully pledged. It will require about three years of successful business to discharge the mortgage held on the Works for a portion of this debt, after which the Company will be in a condition much more encouraging to Stockholders, and they expect, at no distant day to extend the Improvement. They will, however, very gladly avail themselves of any mode that can be suggested by your committee to procure the necessary subscription for the immediate prosecution of the Work, and would suggest the propriety of having an Act passed authorizing the Commissioners of the counties of Fayette and Greene to subscribe, each, \$25,000, to the stock of the Company for that purpose.

As the question of a reduction of tolls on coal, which has been brought before the Legislature annually for the last five years, appears now to be settled, Stockholders and capitalists may feel much more willing to make subscriptions than they have heretofore, during the annual agitation of that question.

The citizens of Virginia are now making a vigorous effort to procure stock to extend the Improvement to Fairmount. This makes it more important that we should raise the means, without delay, to connect with them at the State line. I will heartily concur in any movement that will promote this desirable end.

Respectfully yours,

J. K. MOORHEAD,

*President Monongahela Navigation Company.*

Immediately after the adjournment of the Legislature a movement was made by the citizens of Fayette and Greene counties, which being regarded by the Board as the index of a reviving interest in the Work, they endeavored to turn it to the best possible advantage, as the following extracts from their minutes will show:—

“At a meeting of the Board on the 7th April last,

“Mr. Craig presented the following preamble and resolutions, which were, on motion, adopted:

“It having been stated by the President that meetings of the citizens of Fayette and Greene counties are to be held, at Mansontown, in the former county, on the 22d instant, and at Carmichaeltown, in Greene county, on the 23d instant, in relation to the extension of the Improvement to the Virginia State line; therefore,

“*Resolved*, That the President of the Board be authorized and instructed to proceed to those places at the times above stated, and then and there open books for the subscription of stock for the extension of said Improvement to the Virginia State line.

“*Resolved*, That the President be authorized, at his discretion, to place said books in the hands of responsible citizens of said counties, for the purpose of obtaining additional subscriptions in such manner as they may deem advisable.

“*Resolved*, That the above resolutions be published in the newspapers of Fayette and Greene counties.”

The meetings above referred to were attended by the President and Mr. Dawson, one of the Managers. There was considerable anxiety manifested by the citizens to have the Improvement extended; several addresses were made, and many questions propounded to the President about the situation and prospects of the Company, all of which were satisfactorily answered by him and his colleague. Books were opened for the subscription of stock; two citizens were appointed by the meeting for each of the townships through which the Improvement would pass, in whose hands the books were placed, with the distinct understanding that they would exert themselves to procure stock and make report to the Board of their success. We regret to say that not a single report has yet reached the Board, showing that however anxious they are for the extension, they appear not to be prepared to contribute the funds required for its construction.

It will be seen from the foregoing that the Board have made various attempts to hasten the contingency which requires them to put the Work under contract, but without avail; nor is it strange that people should hesitate about investing their funds in a corporation that, notwithstanding its Stockholders have expended their money many years since, and received no return—although they have constructed the most magnificent local Improvement in the United States, and added hundreds of thousands of dollars to the value of the region through which it passes, yet they are annually arraigned before the Legislature—a reduction of their tolls, and in some cases an entire exemption, is sought; in fact, some go so far as to say their franchise should be forfeited.

The Improvement must be extended to the State line. From the fruitless efforts to obtain stock in the country, it is now apparent that when it is made, the City of Pittsburgh will be looked to, to furnish the larger portion of the capital; this, we fear, her citizens will not do until the present debt of the Company is paid, which will require about two years more to accomplish; and then, if they are to be harassed and required to defend themselves annually before the Legislature, we doubt whether

they can be induced to contribute to so unpromising an object. We deem it our duty, however, to lay this statement of the whole case before the Stockholders, that they may take such action in the premises as the importance of the case seems to require.

The Board have only to add, that the accompanying Reports of the Treasurer and Cargo Inspector, to which they beg leave to refer, will exhibit the receipts and disbursements and the business of the Improvement in all its details, with the amount of revenue derived from each several item of which it is composed.

Respectfully submitted,

J. K. MOORHEAD,

*President.*



## STATEMENT

*Of the Business on the Monongahela Slackwater during the  
Year ending December 31st, 1851.*

|                                          |   |   |          |    |
|------------------------------------------|---|---|----------|----|
| Receipts from Passengers,                | - | - | \$19,299 | 85 |
| “ “ Coal,                                | - | - | 17,850   | 24 |
| “ “ Freights, &c.                        | - | - | 28,824   | 52 |
| Total Tolls year ending Dec. 31st, 1851, |   |   | \$65,974 | 61 |

*Receipts at the several Locks.*

|                 |   |   |   |   |          |    |
|-----------------|---|---|---|---|----------|----|
| Lock No. 1,     | - | - | - | - | \$38,489 | 82 |
| “ No. 2,        | - | - | - | - | 13,109   | 85 |
| “ No. 3,        | - | - | - | - | 4,878    | 02 |
| “ No. 4,        | - | - | - | - | 9,496    | 92 |
| Total as above, | - | - | - | - | \$65,974 | 61 |

*Trade of Pool No. 1, both ways.*

|                                    |   |   |       |   |       |
|------------------------------------|---|---|-------|---|-------|
| Tow Boats,                         | - | - | -     | - | 2,221 |
| Flats,                             | - | - | -     | - | 5,975 |
| Total,                             | - | - | -     | - | 8,196 |
| No. of Clearances issued Eastward, | - | - | 2,792 |   |       |
| “ “ “ Westward,                    | - | - | 3,500 |   |       |
| Total,                             | - | - | 6,292 |   |       |

## STATEMENT

*Of Freight shipped both ways on the Monongahela Slack-water, during the Year 1851.*

| SHIPPED EASTWARD.      |       |            | ARRIVED WESTWARD,      |          |            |
|------------------------|-------|------------|------------------------|----------|------------|
| Flour,                 | bbls. | 2,181      | Lime,                  | bush.    | 38,260     |
| Salt,                  | "     | 20,097     | Wheat,                 | "        | 4,187      |
| Empty                  | "     | 4,548      | Sand,                  | "        | 106,800    |
| Whiskey,               | "     | 6,277      | Oats, &c.              | "        | 55,045     |
| Apples,                | "     | 561        | Potatoes,              | "        | 4,137      |
| Potatoes,              | bush. | 4,801      | Flour,                 | bbls.    | 58,120     |
| Boards,                | feet, | 6,552,158  | Whiskey,               | "        | 4,779      |
| Timber,                | "     | 299,693    | Salt,                  | "        | 361        |
| Pig Iron,              | tons, | 1,057      | Empty                  | "        | 6,522      |
| Copper Ore,            | "     | 661        | Apples,                | "        | 10,073     |
| Shingles,              | No.   | 1,790,000  | Cider,                 | "        | 150        |
| Hoop Poles,            | "     | 12,550     | Iron Ore,              | tons,    | 260        |
| Lath,                  | "     | 329,400    | Pig Iron,              | "        | 542        |
| Brick, (fire,)         | "     | 89,513     | Hay,                   | "        | 254        |
| Carriages,             | "     | 67         | Wood,                  | cords,   | 241        |
| Hogs,                  | "     | 10         | Stone,                 | perches, | 7,090      |
| Horses,                | "     | 226        | Posts,                 | No.      | 12,106     |
| Wagons,                | "     | 68         | Staves,                | "        | 43,642     |
| *Hemp,                 | lbs.  | 476        | Hoop Poles,            | "        | 41,300     |
| *Dried Fruit,          | "     | 102,395    | Lath,                  | "        | 12,300     |
| *Tobacco Leaf,         | "     | 526,389    | Brick,                 | "        | 1,768,200  |
| *Butter, Lard, &c.     | lbs.  | 441,336    | Carriages,             | "        | 53         |
| *Ginseng & Beeswax,    |       | 54,959     | Wagons,                | "        | 114        |
| *Wool, Feathers, &c.   |       | 389,290    | Horses,                | "        | 185        |
| *Bacon and Pork,       |       | 3,683,113  | Hogs,                  | "        | 668        |
| Total lbs class'd fr't |       | 26,849,067 | S. B. Hulls,           | "        | 29         |
|                        |       |            | Window Glass,          | bxs.     | 58,586     |
|                        |       |            | Boards,                | feet,    | 474,034    |
|                        |       |            | Timber,                | "        | 84,521     |
|                        |       |            | Iron,                  | lbs.     | 74,123     |
|                        |       |            | Nails,                 | "        | 629,400    |
|                        |       |            | Eastern Mdze.          | "        | 9,125,386  |
|                        |       |            | Total lbs class'd fr't |          | 14,844,931 |

\* For Eastern markets.

*Passenger Returns of the Boats running on the Monongahela  
Slackwater, for the year 1851.*

| BOATS.                     | PASSENGERS.          |        | NO. OF<br>LOCKS. | TOLLS.                    |
|----------------------------|----------------------|--------|------------------|---------------------------|
|                            | THROUGH.             | WAY.   |                  |                           |
| Atlantic, . . . . .        | 13,481 $\frac{1}{2}$ | 17,367 | 29,785           | \$ 5,455 82 $\frac{1}{2}$ |
| Baltic, . . . . .          | 7,102 $\frac{1}{2}$  | 11,031 | 18,968           | 3,103 86 $\frac{1}{2}$    |
| Fashion No. 2, . . . . .   |                      | 5,848  | 8,991            | 629 87                    |
| Stephen Bayard, . . . . .  |                      | 2,665  | 4,024            | 281 68                    |
| John M'Kee, . . . . .      |                      | 17,391 | 24,117           | 1,688 19                  |
| Thomas Shriver, . . . . .  |                      | 18,785 | 33,628           | 2,353 96                  |
| Reveille, . . . . .        |                      | 486    | 739              | 51 78                     |
| Youghiogheny, . . . . .    |                      | 1,052  | 1,769            | 123 83                    |
| Globe, . . . . .           | 363 $\frac{1}{2}$    | 176    | 292              | 111 31 $\frac{1}{2}$      |
| Clarion, . . . . .         |                      | 161    | 306              | 21 42                     |
| Genesee, . . . . .         |                      | 3,649  | 6,243            | 437 01                    |
| R. H. Lindsay, . . . . .   | 212 $\frac{1}{2}$    | 144    | 203              | 67 33 $\frac{1}{2}$       |
| Redstone, . . . . .        | 9,903 $\frac{1}{2}$  | 13,861 | 23,518           | 4,122 13 $\frac{1}{2}$    |
| Thomas Scott, . . . . .    |                      | 3,513  | 5,334            | 373 88                    |
| Cape May, . . . . .        | 156 $\frac{1}{2}$    | 305    | 580              | 79 72 $\frac{1}{2}$       |
| Julia Dean, . . . . .      | 328 $\frac{1}{2}$    | 573    | 993              | 151 63 $\frac{1}{2}$      |
| Venture, . . . . .         | 440                  | 234    | 462              | 142 34                    |
| Justice, . . . . .         |                      | 42     | 76               | 5 32                      |
| Transient Boats, . . . . . | 127                  | 840    | 986              | 100 77                    |
| Total, . . . . .           | 32,115 $\frac{1}{2}$ | 98,123 | 161,014          | \$19,299 85 $\frac{1}{2}$ |

*Passenger Business in 1850 and 1851 compared.*

|                                  | 1850.                     | 1851.                     | INCREASE AND<br>DECREASE, 1851. |
|----------------------------------|---------------------------|---------------------------|---------------------------------|
| Through Passengers, . . .        | 38,988 $\frac{1}{2}$      | 32,115 $\frac{1}{2}$      | 6,873                           |
| Way Passengers, . . . . .        | 77,351                    | 98,123                    | 20,772                          |
| Total, . . . . .                 | 116,339 $\frac{1}{2}$     | 130,238 $\frac{1}{2}$     | 13,899                          |
| Toll on thro' passengers, . . .  | 9,747 12 $\frac{1}{2}$    | 8,028 87 $\frac{1}{2}$    | \$1,718 25                      |
| Toll on way passengers, . . .    | 8,955 17                  | 11,270 98                 | 2,315 81                        |
| Total passenger tolls, . . . . . | \$18,702 29 $\frac{1}{2}$ | \$19,299 85 $\frac{1}{2}$ | \$597 56                        |

## STATEMENT OF COAL SHIPPED

*In the several Pools of the Monongahela Slackwater during the Year 1851.*

| Months. | Pool No. 1. | Pool No. 2. | Pool No. 3. | P'l No. 4. | Total.     |
|---------|-------------|-------------|-------------|------------|------------|
|         | BUSHEL.     | BUSHEL.     | BUSHEL.     | BUSHEL.    | BUSHEL.    |
| Jan'y.  | 204,400     | 44,300      | 111,900     | 44,101     | 404,701    |
| Feb'y.  | 188,600     | 755,089     | 153,460     | 35,277     | 1,132,426  |
| March,  | 309,200     | 482,380     | 183,214     | 114,798    | 1,089,592  |
| April,  | 686,800     | 847,556     | 212,523     | 114,799    | 1,861,678  |
| May,    | 545,700     | 819,230     | 156,978     | 93,803     | 1,615,711  |
| June,   | 258,600     | 126,000     | 98,600      | 25,900     | 509,100    |
| July,   | 271,600     | 67,750      | 56,600      | 10,800     | 406,750    |
| Aug.    | 277,600     | 504,601     | 246,833     | 56,455     | 1,085,489  |
| Sept.   | 127,400     | 70,750      | 39,400      | 25,000     | 262,550    |
| Oct.    | 331,500     | 95,500      | 115,800     | 57,700     | 600,500    |
| Nov.    | 665,324     | 1,825,472   | 307,116     | 190,291    | 2,988,203  |
| Dec.    | 238,900     | 207,540     | 86,878      | 31,210     | 564,528    |
| Total,  | 4,105,624   | 5,846,168   | 1,769,302   | 800,134    | 12,521,228 |

## RECAPITULATION.

| POOLS.       | Bushels in Boats | Bushels in Flats. | TOLLS.      |
|--------------|------------------|-------------------|-------------|
| No. 1, . . . | 1,513,524        | 2,592,100         | \$3,266 59  |
| No. 2, . . . | 5,074,543        | 771,625           | 9,831 65    |
| No. 3, . . . | 639,202          | 1,130,100         | 3,375 93    |
| No. 4, . . . | 417,733          | 382,401           | 1,376 07    |
| Total, . .   | 7,645,002        | 4,876,226         | \$17,850 24 |

*Comparison of Coal Business for 1850 and 1851.*

|                   | 1850.       | 1851.       | Increase and Decrease in 1851. |
|-------------------|-------------|-------------|--------------------------------|
| Bushels in Boats, | 7,825,042   | 7,645,002   | 180,040                        |
| “ Flats,          | 4,472,925   | 4,876,226   | 403,301                        |
| Tolls, . . . . .  | \$17,023 57 | \$17,850 24 | \$826 67                       |

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